

**"STANDARDS" vs "PRINCIPLES" IN THE  
ORGANIZATION OF INDUSTRIAL  
ENTERPRISE**

By  
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## CHAPTER I

### THE PROBLEM

#### Tentative Statement of Purpose:

A tentative purpose of this study may be readily stated in general terms. It is to make a critical study of a procedure for the development of the organization of industrial enterprises which may offer promise of greater productivity in actual operations than is customarily achieved in current practice. More specifically, it may be said that the hypothesis of the inquiry poses a question as to the desirability and feasibility of utilizing "organization standards" for application to enterprises within designated classifications, in lieu of many of the steps usually taken in individual cases in the development of an appropriate enterprise organization from "principles."

#### Definitions:

The tentative purpose of this inquiry as given above provides a broad picture of the idea that is proposed for investigation. However, the terminology used in management papers and discussions is far from uniform. The existing condition is well described by one writer

in a positive manner:

The art of management has developed rapidly and uncontrolled with relatively little thought given to research on exactness of its terminology. As a result confusion regarding the meaning of terms used is rampant and misinterpretation of communications is prevalent throughout the whole field of business management.<sup>1</sup>

In consequence of this situation great care must be taken by all persons concerned to understand fully the meanings applied by a particular writer or speaker presenting a topic in the management field. And of course a major responsibility rests upon authors of management papers to furnish sufficiently detailed definitions of terms employed so that precise communication of the ideas expressed may be anticipated. In an endeavor to achieve this aim definitions of these terms, as used in this paper, together with comments on their variations frequently found in common practice are as follows:

Management:

a. The functions of planning, allocating, organizing, directing, coordinating and controlling human and material resources toward a common goal.

b. Collectively, the employees who perform the above function, usually interpreted for industrial enterprises to include foremen and all higher officials through the top executives.

Although the term top management does not appear in the title of the dissertation, much of our greatest concern lies in that phase of

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<sup>1</sup>John G. Glover, Fundamentals of Professional Management, (New York: Republic Book Company, Inc., 1954), p. 146.

management responsibility. It is therefore deemed expedient to include here a definition to indicate clearly its relationship within the whole management function.

Top Management:

a. That part of the management function which includes: determining the objectives of the enterprise; prescribing the basic policies for the guidance of pertinent personnel in their endeavor to attain prescribed objectives; rendering decisions on matters of such major importance that action thereon is reserved to top management; and performing supervision by control procedure or otherwise as is necessary to provide assurance that assigned duties are being performed fully and efficiently.

b. Collectively, the executives who perform the functions enumerated in the preceding paragraph a.

It is well known that appreciation of the relative importance of human as compared to material factors in the attainment of efficient management has greatly augmented in recent years. Comparative evaluation of these two elements is far different from the status which prevailed in the early days of development of "scientific" management. But as is usual in the rapid change of any conditions, the concept of the importance of the human factor in management processes has gone beyond reasonable bounds in the writings and teachings of some authors. In fact, in some instances, it is asserted that management is concerned only with personnel. Material considerations are completely excluded. For example, in the words of one author "Management is personnel

administration."<sup>2</sup>

Another author formally defines management as:

Responsibility for the effective planning and regulation (or guidance) of the operations of the enterprise, such responsibility involving (a) the installation and maintenance of proper procedures to ensure adherence to plans; and (b) the guidance, integration and supervision of the personnel comprising the organization and carrying out its operations.<sup>3</sup>

No mention whatever is made of material resources.

Such a position is untenable. Surely management must be concerned with the allocation and methods of utilization of material as well as human resources actually or potentially available to an enterprise. For example, the determination of the amount of funds required, sources of their procurement, the nature of obligations to be assumed in connection therewith, and allocations from sums actually secured for various purposes whether for hire of personnel or purchase of facilities are matters pertaining to material resources. Yet obviously they are phases of financial management, and in large part of major concern to top management. If one reviews the early development of "scientific management," it is clear that the pioneers of the movement had no

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<sup>2</sup>Lawrence A. Appley, as quoted by Paul Pigors and Charles A. Myers, Readings in Personnel Administration, (New York: McGraw-Hill Book Company, Inc., 1952), p. 1.

<sup>3</sup>E. F. L. Brech, Management, Its Nature and Significance, 2nd Ed., (London: Sir Isaac Pitman and Sons, Ltd., 1948), p. 36.

doubts concerning management's responsibility for material factors, for the ready availability of tools of proper shape and size. Taylor's researches concerning the types of shovels for laborers engaged in different kinds of work, and with respect to cutting tools for machine operations are classic examples pertinent to this point.<sup>4</sup>

Organization:

A tool utilized by management to achieve effective performance in the accomplishment of the objectives of the business; it is the means by which the human and material resources available to an enterprise are assigned, allocated and inter-related to provide for the discharge of all necessary functions as a coordinated action.

Following the great increase in emphasis on the human element in industry in recent years, it has become common practice for writers on the subject to consider organization as exclusively a personnel matter. While agreeing that personnel constitutes the major problem of organization, it is deemed inappropriate to exclude the concept of material factors therefrom. As Dr. Glover noted: "A factory

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<sup>4</sup>Frederick W. Taylor, The Principles of Scientific Management, (New York: Harper and Brothers, 1942), p. 68; and "On the Art of Cutting Metals," Scientific Management, Clarence Bertrand Thompson, Ed., (Cambridge: Harvard University Press, 1914), pp. 243-4.

building is an organization of inanimate members.<sup>5</sup> In a related point of view, the exclusion from consideration in scientific organization, of the facilities, machines, and other equipment which in combination do most of the work in modern industry, has been cited by the American Society of Mechanical Engineers as a serious oversight.<sup>6</sup>

An improper assignment of available machine tools or other facilities would materially reduce the performance of any enterprise. The desirability of maintaining this concept is recognized by military departments in the inclusion in "Tables of Organization" for military units of a tabulation of the major items of equipment pertaining to such units.

The reader should note that this is a broad concept of organization. It is in accord with a view expressed by Professor Spriegel:

In its broadest sense organization refers to the relationships between the various factors in a given endeavor. Thus land, labor, capital and the entrepreneur may be combined in various relationships to produce an economic organization. . . . From the standpoint of the enterprise as a whole organization is the structural relationship between the various factors in an enterprise.<sup>7</sup>

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<sup>5</sup> Glover, op. cit., p. 155.

<sup>6</sup> American Society of Mechanical Engineers, Small Plant Management, Edward H. Hempel, ed., (New York: McGraw-Hill Book Company, Inc., 1950), p. 88.

<sup>7</sup> William R. Spriegel, and Richard H. Lansburgh, Industrial Management, 5th edition, (New York: John Wiley and Sons, Inc., 1955), p. 42.

The above definition of organization, it may be noted, is restricted in application to a business enterprise, the specific interest of this paper. It must be realized, of course, that the term "organization," if unmodified has a much broader significance. Many writers desiring to emphasize this fact frequently state that organization, as a process, occurs whenever two or more persons unite in any activity for the purpose of achieving a common goal. This is the lower limit of organization only if one's concept of organization relates exclusively to humans. In fact, however, the concept of organization commonly extends much further. An artisan may organize his work; an artist may organize a painting; a thinker may organize his ideas. A notable example in this last cited area is the effort of Abraham Lincoln which resulted in a product widely acclaimed as approaching the optimum in English composition, i. e. the Gettysburg Address. Surely the most casual reader of this address must realize that there was nothing haphazard in the selection and arrangement of the words composing it. And certainly it is evident that the author had a very clear objective in mind as he shaped the message. This constitutes true organization. Nevertheless, in conformity with the previously cited limitation in the scope of this paper, the "principles" and "standards" to be analyzed and developed subsequently will relate to the restricted concepts given above.

One elaboration seems warranted at this point. Some writers

call attention to the fact that organization, per se, provides no assurance that the use to which it may be put will be either good or bad, ethical or unethical. This is true. However, in our concern to construct an efficient organization for an industrial enterprise we include a requirement that it be a benefit to the society that authorizes its being.

Employing a phrase of the classical economists, we may say that if "in the long run" it contributes nothing or is an actual detriment to the general good, economic or otherwise, there is no justification for its existence. In that event it is probable that the society would provide sanctions to require adjustment or dissolution of the activity.

Industrial:

industrial, a and n. 1. Of industries . . . <sup>8</sup>

and

industry, n. . . . branch of trade or manufacture.<sup>9</sup>

Enterprise:

enterprise, n. . . . 2. The act of engaging, or the disposition to engage, in difficult undertakings; boldness, energy, and

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<sup>8</sup>The Concise Oxford Dictionary of Current English, Fourth Edition, revised. (Oxford: The Clarendon Press, 1952).

<sup>9</sup>Ibid.

invention exhibited in practical affairs, especially in business.<sup>10</sup>

"Principles":

In this discussion, correct principles are considered to be fundamental truths which may properly be used as bases for reasoning. Since this concept is in accord with almost universal usage of the term, no confusion is engendered by its employment. The term "principles" as used in the title and throughout the paper refers specifically to the "principles" of business organization and management as traditionally treated by the teachers of "scientific management" since the time of Frederick Winslow Taylor. Although these "principles" are variously stated, many authorities indicate quite general agreement in identifying them.

L. Urwick provides a pertinent comment on this point in his Elements of Administration. After stating that the main theme of the monograph focuses in a logical scheme various "principles of administration" formulated by different authorities, he states: "The fact that such 'principles' worked out by persons of different nationalities, widely varying experience and, in the majority of cases, no knowledge of each others' work, were susceptible to such logical arrangement, is

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<sup>10</sup> New "Standard" Dictionary of the English Language, (New York: Fund and Wagnalls Company, 1955).

in itself highly significant."<sup>11</sup>

A point might be raised by a reader that authors of organization treatises differ widely in the number of principles that they deem applicable. Such variations do exist and one writer lists ninety-six principles.<sup>12</sup> But divergences of this nature do not negate the concept expressed above; they may be explained by differences in interpretation as to what constitutes a fundamental.

"Standards":

The terms standards and standardization are familiar words in American industry, for the developments in the processes of interchangeability of parts and the mass production are due in large measure to the adoption of techniques of standardization. However, it seems that to most people the fields of usefulness of these techniques are limited to material things. Everybody knows that we have standard materials, standard bolts and nuts, standard screws, standard nails, standard machines, standard sizes of lumber, standard sizes of concrete blocks, etc., etc. ad infinitum, and that the attainment of our high level national economy owes much to the adoption of such standards. These are all "technical standards."

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<sup>11</sup> Lyndal Urwick, The Elements of Administration, (New York: Harper and Brothers, 1943), p. 7.

<sup>12</sup> Alvin Brown, Organization, (New York: Hibbert Printing Company, 1945), pp. 255-264.

However, industrial standards are not limited to material or technical standards. For example, Morris L. Cooke, a pioneer of Scientific Management states:

A standard under modern scientific management is simply a carefully thought out method of performing a function, or carefully drawn specifications covering an implement or some article of stores or product. The idea of perfection is not involved in standardization. The standard method of doing anything is simply the best method that can be devised at the time the standard is drawn.<sup>13</sup>

Nevertheless, "a carefully thought out method of performing a function," if prescribed for action, becomes a performance standard and is included in the general group usually designated "Management Standards" or "Managerial Standards."

Professor Balderston defines the types of industrial standards in somewhat greater detail:

Types of industrial standards. Industrial standards fall into two broad groups: technical and managerial. Standards for the size, shape, composition, and color of product and its parts are technical in nature. So, too, are those standards that govern processes and equipment. Managerial standards apply to systems, organization practices, procedures, methods, and expected performance.

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<sup>13</sup> Morris L. Cooke, as presented in Bulletin No. 5, of the Carnegie Foundation for the Advancement of Teaching. (Quoted by American Technical Society, Practical Business Administration, (Chicago: American Technical Society, 1935), p. 74.

<sup>14</sup> C. Canby Balderston and others, Management of an Enterprise, (New York: Prentice Hall Inc., 1949), p. 117.

Our interest in this study relates to "Management Standards" and primarily to the single phase of that group which we shall designate as "Organization Standards." The term "Standards" in the title of the dissertation, as is implied in the reading of the full title, refers to the "Organization Standards" of the various enterprise classifications. The concept contemplates "Organization Standards" on the basis of one "Standard" per enterprise classification. Each such "Organization Standard" will comprise a number of separate items referred to as specifications, criteria, attributes, or other similar designation.

As a further clarification, it may be noted that the concept envisages as a possibility a final goal of a "Book of Organization Standards." This volume would contain all of the separate "Organization Standards" for the various enterprise classifications, one "Standard" per classification. Hence it would comprise "Organization Standard for Enterprise Classification #1;" "Organization Standard for Enterprise Classification #2;" . . . "Organization Standard for Enterprise Classification #n."

Arrangements in similar form are typical in standard practice as approved by technical societies such as the American Standards Association, the American Society of Mechanical Engineers, and the American Society for Testing Materials. A good illustration of this arrangement is provided by the last named Society in its 1952 Book of

### A. S. T. M. Standards.<sup>15</sup>

It is believed that the above discussion sufficiently defines "Standards" as used in the title, in order to provide an understanding of the intent of the study. The discussion will therefore be interrupted at this point. However, as a more thorough treatment of the nature and the basis for establishing "Management Standards" will be a necessary prelude to a consideration of methods of procedure in our study, the discussion of this matter will be resumed in a later chapter.

#### Restatement of the Problem:

Based upon the concepts expressed above, it is now possible to express more concisely and precisely the purpose of this inquiry by queries, as follows;

Query a. Is it desirable and feasible to establish "Organization Standards" for industrial enterprises, utilization of which may be expected to increase operational efficiency and productivity?

And provided an affirmative answer is obtained to the above question, the following:

Query b. What are some of the criteria for an "Organization

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<sup>15</sup> American Society for Testing Materials, 1952 Book of ASTM Standards, (New York: American Society for Testing Materials, 1952).

"Standard" in a particular classification of enterprises, the utilization of which may be expected to increase the effectiveness of management?

As a further clarification it should be noted that the purpose of the inquiry is here established by queries only. The inquiry is intended to secure data by research, which, when assembled, analysed and interpreted may provide an adequate basis for determination of the questions posed. The inquiry is not undertaken with an intent to "prove" any proposition. Neither affirmative nor negative answers to the queries are pre-supposed. Whether or not the queries can be resolved logically, and if so, the nature of the solution must await consideration of the finalized data. Since this is a social problem, its determination will necessarily be a subjective action of the person making the decision. Therefore, in the absence of evidence which is overwhelming in its import one way or the other, it seems manifest that different conclusions should be expected among readers. Similarly the degree of concurrence of readers with the findings of the author will be dependent upon the same and other factors.

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#### Justification of the Research:

With a precise statement of purpose of the proposed inquiry before us, several questions arise as to whether research in the area contemplated can be justified. Is the concept of the possibility of

advantageously using "standards" in lieu of "principles" in the organization of industrial enterprises now? Such a condition must be demonstrated. But originality of an idea is not alone sufficient to warrant economic research, and we are concerned with an economic problem. Change merely for the sake of change cannot be justified. A substantial need for a proposed change must be evidenced.

Initiation of a research program can be justified only if there is a present promise that the probability of economic gain likely to accrue from utilization of the knowledge gained in the research, fully compensates for the expenditures for the research. This necessitates a pre-research estimate of the advantage anticipated to follow a proposed program.

At this point a reader, attempting to analyze the intent of the inquiry as expressed in Query a, may wish to evaluate the implied promise of increased effectiveness if an affirmative answer materializes. He may raise a number of questions to clarify his thoughts. How are such "standards" to be used? What advantages are expected from such use? Are there any similar applications, past or present?

The proposed "standards" are visualized as a readily available valuable aid to management in initiating and improving the operation of industrial enterprises. It is expected, naturally, that their importance to management of small enterprises would be of a much higher order than to that of large ones. This follows, of course, from the

fact that the latter with greater resources are able to secure professional help more readily.

The method of use would be for the management to:

1. Refer to an appropriate "Book of Standards" and identify the particular "Classification" to which his enterprise pertains, as determined by the criteria establishing the "classification":  
i.e. Type of Industry (manufacturing); type of product (blowers, 3564); annual product "value added" (\$2,000,000.00); number of employees (400), etc.
2. Organize the enterprise on the basis of the "attributes", i.e. the specifications of the pertinent standard, expanding as warranted but modifying or departing therefrom only to the extent that local or individual circumstances necessitate.

It must be realized, certainly, that some expansion will always be necessary to adapt the basic pattern to an actual situation. This is accomplished by provision of additional rules, regulations, instructions, orders, etc., The extent and nature of such material must be fitted to the situation. The procedure outlined is that followed in the application of any standard. Of course, with respect to the simpler forms of "technical standards," variance from the prescribed specifications are usually unnecessary and are not permitted. In the more complex or low volume items, however, and in some inexpensive high volume

products, variances are frequently made. It must be kept in mind, of course, that most "management standards" are "company standards" rather than "American standards." Even within a company many such standards in similar applications may differ appreciably.

With respect to the second hypothetical question raised above, it may be said that the advantages inherent in the process of standardization are anticipated. These include greater accuracy, saving of time, improved coordination and reduced costs, hence greater productivity with improvement in profits or other benefits. This topic is susceptible to unlimited expansion and there are many documents on the subject. Two excellent treatments are cited for reference. <sup>16, 17</sup>

The fullest import of the advantages that may be gained by use of standards is the idea that all past knowledge, tested, condensed, and coded by the most competent experts of the past and present may be made available for present use. A related thought is expressed by an official of the Aluminum Company of America.

Many engineers in industry today are wasting time and money. They are wasting money by creating their own special solutions - specials cost more than standards. In contrast to the special

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<sup>16</sup> Benjamin Melnitsky, Profiting from Industrial Standardization, (New York-Chicago: Conover-Nast Publications, Inc., 1953).

<sup>17</sup> Dickson Reck, ed. National Standards in a Modern Economy, (New York: Harper and Brothers, 1956).

solution standardization is the organized solution and recording of common problems.<sup>18</sup>

Appreciation of the advantages to be gained by the improvement and expansion of managerial standards programs has augmented greatly in recent years. Additional comment will be made in a later section of this paper, in the course of the discussion of the developments in that field.

With respect to the third hypothetical question it must be noted that this is a new concept with respect to the organization of industrial enterprises. As a detailed exposition is essential to demonstrate the relationship of the proposed idea to past and present practice and thought, the discussion of this topic will be undertaken in a separate section below.

#### A New Concept:

The monumental work of Frederick Winslow Taylor brought the appellation "scientific management" into every day use as a sine qua non term in the consideration of matters pertaining to business management, organization and operation. Since that time educators have traditionally treated effective business "management" and "organization" as based upon a number of "principles." As noted previously, these "principles" are variously stated but many authorities indicate quite general agreement

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<sup>18</sup>J. R. Walgren, "Company Member Conference," The Magazine of Standards, vol. 27, No. 7, July, 1956, p. 197.

in identifying them.<sup>19</sup>

Likewise there appears to be almost complete unanimity in the view of these authorities, that it is not feasible to go beyond the application of such principles in attempting solutions of problems of organization for specific enterprises. It seems possible, however, that this is an extreme view.

In particular, it appears that advances in business organization techniques since Taylor's time may warrant establishment of organizational "standards" for various classifications of enterprises.

The possibility of advantageously applying "standards" of this type in such a manner is the basis for this inquiry. At this point in the discussion it is desired to demonstrate that the concept as set forth in this paper is new. Proof of this fact will be established: (1) by citation of the only instances found in a search of literature which seem to evidence any element of this idea; and (2), by a number of quotations and citations considered representative of the many writers who state or imply that standards of organization are impracticable. There were two instances in category (1):

- a. One instance was found in which the concept of an organization standard appears to be somewhat similar to that of this paper. This

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<sup>19</sup>Urwick, op. cit., p. 7.

usage is in a text on managerial control prepared by a well known firm of management consultants and intended for use of industrial executives.<sup>20</sup> However the coverage of the listed criteria is considered to be less than is feasible and desirable for effective use as contemplated herein. Further, although the items shown are generally considered as essential to good organization practice, there is no indication of the extensiveness of the data on which their inclusion was based. In the absence of information in this regard, it is inferred that the tabulation is based solely on the general experience of this particular company. It may be noted also, that although the listing is designated as a standard there is no evident appreciation that such a classification could be made to increase greatly the effectiveness in organizational building and maintenance throughout industry, as compared to working solely from principles.

b. Another instance in the literature that seems to support the hypotheses as stated, is essentially a case study of the Sylvania Electric Products, Inc.<sup>21</sup> It is an article by the president of the company describing its situation and methods of operation in considerable detail. Although this is a multi-plant corporation, with a very

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<sup>20</sup>George T. Trundle, Jr., Managerial Control of Business, (New York: John Wiley and Sons, Inc., 1948), p. 66.

<sup>21</sup>Don G. Mitchell, "Big Business in Small Plants," Problems and Policies of Decentralized Management, General Management Series No. 154, (New York: American Management Association, 1952), p. 3.

large number of plants, all but nine of them have less than 1000 employees, and only one of these less than 100. As the company pursues a policy of extreme decentralization, many of the problems are closely related to those of the classification of our study.

Referring to the organization of these plants, Mr. Mitchell says: "Pattern of Organization Needed. - Obviously, there must be a pattern of local organization for a company with decentralized operation. How that pattern is adjusted to fit local conditions is a matter for local determination."<sup>22</sup> Just how similar the product lines of these plants are is not evident from the report. But if we consider that the plants fall into a designated classification, it appears that the practice in vogue here for an intra-company procedure, agrees with the concept of our hypotheses for application to a much broader field.

The citations provided below pertain to category (2):

a. A rather positive view is expressed by the American Society of Mechanical Engineers:

There are no standard patterns for the organization structure or panaceas for the solution of organization problems since organization is an association of human beings to accomplish a common purpose. Logic, common sense, and a large measure of human understanding are required in a good organizer - there is no short cut to good organization practice.<sup>23</sup>

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<sup>22</sup>Ibid., p. 6.

<sup>23</sup>American Society of Mechanical Engineers, Small Plant Management, Edward H. Hempel, ed., (New York: McGraw-Hill Book Co., 1950), p. 167.

b. Another seemingly positive conviction is voiced by a noted educator and management consultant:

There is no one kind of organization chart that is right. In fact there is no one kind of organization that is right. If there is any one thought that I want to leave with you without any doubt, it is that there is no standard form of organization no ideal form of organization. <sup>24</sup>

c. Sheldon referring to organization says: "There is no complete ideal, but the following may be regarded as necessary principles. . . ." <sup>25</sup>

d. Petersen comments: "Despite the foregoing illustrations, no organization chart can be drawn of a given business concern which would fit exactly the requirements of every other business in its class." <sup>26</sup>

e. And finally, Kelley and Lawyer in discussing organization of a small business note: "In practice, organization must be the answer to a particular problem. This means that the conditions existing in the business are more important determinants of the setup

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<sup>24</sup>James Oscar McKinsey, Sixteen Trends in Management Organization, Annual Convention Series No. 33, (New York: American Management Association, 1926), p. 23.

<sup>25</sup>Oliver Sheldon, The Philosophy of Management, (London: Sir Isaac Pitman and Sons, Ltd., 1924), p. 143.

<sup>26</sup>Elmore Petersen and E. Grosvenor Plowman, Business Organization and Management, (Chicago: Richard F. Irwin, Inc., 1946), p. 141.

than arrangements illustrated by generalized organization charts.<sup>27</sup>

A casual reading of these quotations seems to affirm the thought that the concept of standardization has no useful field of application to organizational problems. Although comments of this nature are subject to interpretation concerning the detail intended by the author, it is believed that they can be accepted as ample substantiation of a general belief that application of "standards" to organization is impracticable. They will be so considered here.

There is a further point which should not be neglected in connection with this discussion and which is quite aside from discussion of the idea. This point is that no evidence whatever of the application of such standards in actual operation has been revealed.

Accepting the conditions as disclosed in the above discussion as sufficient warrant for continuing our inquiry, we will proceed. In the next section a certain number of restrictions on the scope of the contemplated research will be set forth. These limits are necessary to accommodate the task to the actuality.

#### Limitations of the Inquiry:

The title of this dissertation expresses an interest in the relationship of "principles" and "standards" in the organization of industrial

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<sup>27</sup> Pearce E. Kelley and Kenneth Lawyer, How to Organize and Operate a Small Business, (New York: Prentice Hall, Inc., 1949), p. 329.

enterprise. The term industrial is unmodified. The omission of a modifier is deliberate as it is intended to indicate that the concept of the hypothesis is applicable to all forms of industry. However, in undertaking research on the topic, it is at once apparent that the area of investigation must be greatly curtailed if any semblance of realism is to be maintained. Various types of limitations must be imposed, but in such a manner as to assure that the data assembled are either reasonably representative of the whole, or that their relationship to the different parts be indicated.

The first limitation to be set for this purpose is that the research will be restricted to the manufacturing industry. Manufacturing is preferred as it seems to offer the most lucrative field for possible application of the ideas under consideration. It is the largest single industry in its bearing on the national economy; and the very large number of separate privately owned enterprises which are classed as "small" provide both the greatest opportunity and challenge. Nevertheless, this is only a first step in delimiting the problem for there are 240,881 manufacturing establishments in the United States.<sup>28</sup> Furthermore, these establishments differ greatly in size and composition; their products cover almost the full scope of material "wants"; their

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<sup>28</sup> U. S. Bureau of the Census, Census of Manufacturers, 1947, (Washington: Government Printing Office, 1950), p. 97.

capital equipment varies in kind from hand tools only to complex machines costing millions of dollars; and the number of persons employed in a single plant ranges from one to many thousands. Our first problem is to segregate this total number of plants of extreme diversity into a number of "Classifications of Manufacturing Enterprises" so that all enterprises that fall into a particular "classification" will possess a considerable degree of homogeneity. Since we are working with a given total it is evident that the larger the number of "classifications" we set up with corresponding decreases in the number of enterprises in each "classification," the more nearly will we be able to approach homogeneity within each classification. Establishment of homogeneity within acceptable limits of tolerance, is, of course the essential process of standardization.

The task of setting up specifications for inclusion of items so dissimilar in groups of plants with similar characteristics, might seem to be insuperable at first glance. In fact, if the plan proposed plants of identical characteristics, the task would be simple. There would necessarily be 240,881 "classifications" for there can be no doubt that there are no two enterprises which are identical in all respects.

However, we are not attempting to group identical items. We merely wish to place in various categories establishments which possess a number of similar characteristics. The greater the number

of similar characteristics of plants in a given classification and the smaller their variances, the greater will be the advantages of group treatment; i.e. the advantages of standardization.

Rather than spending our efforts in elaborating on the great differences in many of these plants, it is important that we endeavor to identify the similarities. Limitations must be imposed with this objective in mind. It is well known, of course, that the number of "small" plants far exceeds the number of "large" plants, and that in general the large plants enjoy a much higher level of management efficiency than do the small plants. This is true regardless of whether the unit of size measurement is taken as product "value added," capital invested, or the number of employees. These units of measure suggest additional means of providing for a further segregation of plants into "classifications." All three methods relate to some aspect of the size of the enterprise, but the relative sizes as indicated by the different units may vary widely. For the purpose of this research the number of employees only will be used to classify the plants. This unit is employed simply for convenience, since it is known that more data on this basis is readily available for individual plants than is the case for the other units mentioned. It does not mean that such a basis is a satisfactory one for classifying enterprises for this purpose. An attempt to establish the characteristics most satisfactory for classification of enterprises as here contemplated, would require a separate

research project. Since our purpose is merely the study of the feasibility of utilizing "organization standards," and does not extend to the determination of such a standard for actual application, the classification selected is satisfactory for study.

Another factor which readily comes to mind as a basis for enterprise classification is the nature of the product. This undoubtedly would be essential in an actual classification. However, since as noted above, the aim of this paper is to explore the possibility of applying the use of "organization standards" in enterprise development and operation rather than to construct a working model, the single specification of size by number of employees will serve this purpose.

As a final limitation in the kind of enterprises to be covered, we will restrict the actual research for the most part to consideration of a single enterprise classification as chosen. A "Classification of Single Plant Manufacturing Enterprises - Number of Employees 100-999" is selected for our research as an area of possibly greatest interest. Primary attention will be given to the upper levels of management commonly referred to as "top management."

But in addition to limitations on the classification of enterprises that are to be considered, we must set other bounds to our research. We wish to consider the feasibility of utilizing "organization standards" for a stated purpose. To do this we must visualize the nature of such

a "standard" in sufficient detail to study the proposed application. Of course we cannot construct an "ideal standard." Such an expression is a contradiction in terms. Similarly we cannot set up a complete or final standard for no standard can be complete or final. And, furthermore, since our problem falls in the group of "management standards" and is experimental as well, it is obvious that the details of any pertinent specifications must be extremely transitory.

Therefore the research does not contemplate a complete coverage of all possible items which might be appropriate for criteria of such standards, nor of all the characteristics of those attributes of a proposed standard which are selected for study. A comprehensive research necessary for a task of such magnitude is far beyond the limits of time and personnel available. The inquiry merely seeks a determination of the feasibility of the establishment of "standards" for the cited purpose, together with an identification of some of the primary characteristics of the selected attributes of such a standard. To accomplish the task effectively, without undue expenditure of time and effort, it is essential to reduce the field of investigation to the greatest extent practicable, consistent with the purpose of the inquiry. Perhaps the best way to control the search is to establish a limited number of attributes commonly cited as phases of sound organization, and then to restrict the inquiry strictly to the selected field, major attention being

given to a single facet of each of the designated items. This procedure will be followed. If this study should indicate the feasibility of action of the type proposed, it seems evident that a much more detailed study would be required to establish working "standards" for the various classifications of enterprises.

Chapter I may be summarized as follows: An initial tentative statement of the problems is followed by definitions of the principle terms to be encountered in the paper. The problem is then restated more precisely. A review of circumstances which warrant the research is then provided, and is followed by a discussion of the new concept. A detailed citation of limitations of the research closes the presentation.

In the next Chapter an historical review of the development of the industrial organizational problem will be undertaken. Emphasis will be placed on the development of managerial standards with respect to the possibility of their application to organization.

## CHAPTER II

### HISTORICAL REVIEW

#### Development of "Scientific Method" in Organization:

Organization as a means of achieving goals not possible by individual effort, or more effectively than could be so accomplished, has been utilized since early prehistoric times. Nevertheless, the employment of systematic procedures in the conduct of business operations is of relatively recent origin. This development occurred in the closing years of the nineteenth century and the early years of the twentieth century. It was initiated largely by the efforts of Frederick Winslow Taylor in this country, and by those of Henri Fayol in France. While the work of these two men was in large measure concurrent but independent, their writings and that of their associates and followers form the basis of our present management and organizational practices in business and industry.

At this point it is essential to recall the fundamental nature of Taylor's contribution to a science of management. This contribution may be considered as expressing his philosophy of management, and constitutes, in his words, "the two absolutely essential elements of scientific

management.<sup>1</sup> The two points specified are a "great mental revolution" on the part of both management and workers to change the atmosphere of mutual distrust and suspicion between the parties to one of confidence, trust and co-operation; and secondly, the substitution of scientific investigation and knowledge for individual judgment and opinion and unproven traditional practice. The first of these elements was largely disregarded by the industrial owners and managers of Taylor's time. However it has since gained increasing recognition by top management as a basic foundation for sound organization.

A brief consideration of the work of Henri Fayol is also necessary in the conduct of this study. Fayol devoted his life, as did Taylor, to the introduction of scientific method in the conduct of industrial operations. In contrast to Taylor's shop approach, Fayol's point of attack was from that of top management. His primary work, in so far as it has affected American practice, was in his subdivision of the managerial function into five "elements of administration" as a method of teaching the subject; namely: Planning, Organization, Command, Co-ordination, and Control.<sup>2</sup> This sub-division of the management function,

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<sup>1</sup>Frederick Winslow Taylor, "Testimony Before the Special House Committee," Scientific Management, (New York: Harper and Brothers, 1947), p. 31.

<sup>2</sup>Henri Fayol, General and Industrial Management, (New York: Pitman Publishing Corporation, 1949), p. 43.

under various designations such as "principles," "functions," "basic processes," "processes" and "tools" has been adopted in large measure by educators and industrialists in this country. The particular interest in these elements of management, as far as this study is concerned, is that Fayol indicates that organization must fulfill various duties, which pertain to all of the listed elements. Hence his concept of organization in this respect seems to be in accord with the broad interpretation frequently voiced as: "Administration sets the policies which management carries out through organization."

#### Scope of the Review:

In this review, however, there is no need to attempt a general coverage of the many contributions of these men to the development of a science of management and organization. As previously noted, there is a vast literature on these subjects and the accomplishments in the improvement of managerial techniques are widely known.

This review will be restricted to coverage of the development in standards, and particularly managerial standards, since Taylor's time. A rather comprehensive appreciation of this development and of the present status of managerial standards is considered essential to an understanding of the problem of this dissertation. The study of "organization standards" is merely a study of the possible application of managerial standards to the field of organization.

**Broad Concept of Organization:**

Perhaps at this point note should be taken of the likelihood that some readers may consider the inclusion of a discussion of managerial standards in a treatise on organization as out of place and quite uncalled for. Resolution of such a question is dependent upon one's concept of organization.

This diversity of view is commented upon by Dr. Wilbert E. Moore of Princeton University and his exposition is pertinent here:

Organization in the social sense refers either to the pattern of structure of relationships among a number of persons oriented to a set of goals or objectives, or to the group as a whole viewed as a unit. Actually any seeming ambiguity or looseness in the term is likely to be more apparent than real. Either use in fact implies the other. This is true because the structure is pointless save as a basis for concerted and unified action, and a collection of individuals without established patterns of relationship cannot long maintain any semblance of unity or collective action.<sup>3</sup>

In this connection it seems evident that "standard practices" are merely more detailed statements of "patterns of relationship" referred to by Dr. Moore, than are the functions, job descriptions, etc. of organization manuals. In this paper the concept of organization agrees with the second view expressed by Dr. Moore, i.e. "the group as a whole, viewed as a unity."

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<sup>3</sup>Wilbert E. Moore, Industrial Relations and the Social Order, (New York: The Macmillan Company, 1951), p. 72.

Developments in Standardization:

Brief definitions of "standards" and a short discussion of standardization were included in Chapter I above. These may be called "dictionary definitions." While they furnish some notion of the characteristics of standards they are inadequate communications media of the extent of standardization accomplishments. Much more is needed so that we may use recorded knowledge for planning future projects.

In the study of this topic precision in the use of terms is very important. Stressing this need a prominent authority in the field makes a pertinent comment: "A large part, perhaps the greatest part of standardization is essentially agreement in definition."<sup>4</sup>

That Taylor fully recognized the importance of standardization in both office and shop management is clearly evident from his writings. The second of his two "absolutely essential elements" of scientific management quoted above is convincing evidence. It would be difficult indeed to express in fewer words the prime value of the faculty of standardization as a means of utilizing the accumulated expert knowledge.<sup>5</sup> But particular note should be taken of the fact that Taylor did not confine his vision to materials, equipment, and shop practice. He

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<sup>4</sup>H. Coonley and P. G. Agnew, The Role of Standardization in the System of Free Enterprise, (New York: American Standards Association, Inc., 1941), p. 3, PM 63.

<sup>5</sup>Taylor, Scientific Management, op. cit.

frequently includes mention of office practice in his observations, for example:

It would seem almost unnecessary to dwell upon the desirability of standardizing, not only all of the tools, appliances and implements throughout the works and office, but also the methods to be used in the multitude of small operations which are repeated day after day.<sup>6</sup>

And of course the removal of production planning from the shop to the office which initiated its development into a major function of management was an innovation of Taylor. But there can be no doubt that Taylor's main interest was in the shop and problems closely related to it. As he was an expert in this field it is not surprising that under his leadership the "technical" phase of standardization far outstripped the progress of standardization in higher management affairs. And, of course, the increased productivity following closely on the application of technical standards naturally expedited and expanded their introduction into industry.

The interest in managerial standards remained largely academic for many years. Educators indicated an increasing interest by more frequent mention of them. Perhaps it is of particular interest to note there have been many different approaches made by writers in the field of industrial management in an effort to clarify the numerous applications of standards. A good example of one such endeavor is cited below:

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<sup>6</sup>Frederick Winslow Taylor, Shop Management, (New York: Harper and Brothers, 1911), p. 123.

Classification of Standards. Those standards which for the most part are established by the engineering or other technical branches of the concern and which in general relate to dimension, quality and method in relation to construction, products, processes, tools, machines, quality, inspection arrangement, and similar factors, may be regarded as "technical standards."

Those standards which are formulated by the management of the concern and which are used in the direction, control, and coordination of its activities, may be classified as "managerial" standards.<sup>7</sup>

A later example of this concern is given by another author:

Standards pertaining to the general management of the business include those dealing with finances, costs, procedures, and records. Financial standards frequently take the form of ratios, and show the relationships which exist between the various aspects of the business. The ratio of current assets to current liabilities is always important. The chief executive will also wish to be informed with regard to cash on hand, quick receivables, net income, funded debt, the relation between sales and inventories and the like. . . . They serve as a guide to and a check upon performance which unifies the activity as a whole. Purchasing routines, material control procedure, and the handling of orders would be examples. Performance standards should be determined for this work. Similar standards may be established for individual tasks within the departments and divisions.<sup>8</sup>

Nevertheless, as late as 1947 a survey on the utilization of managerial standards in industry does not warrant any optimism by advocates of these measures:

<sup>7</sup>John G. Glover and Coleman M. Maze, Managerial Control, (New York: The Ronald Press, 1937), p. 49.

<sup>8</sup>Arthur G. Anderson, Merton Joseph Mandeville and John Mueller Anderson, Industrial Management, (New York: The Ronald Press Company, 1942), p. 292.

Company standards ordinarily include purchase specifications, test methods, process and product standards, and other standards which can be grouped together as "technical standards." . . . There is evidence of a broadening in the scope of the standards programs of companies to include managerial activities, although instances of such expansion are not frequent as yet.<sup>9</sup>

The comment quoted above was made in the findings of a research study in which some one hundred companies co-operated. If these conditions are representative of the general industrial practice, it is indeed a serious reflection on the level of managerial effectiveness. However, the existence of the condition as reported seems hardly credible. Consequently there is raised a question as to the reliability of the data submitted by the participating companies.

Did the reporting companies have advice as to what constitutes a "standards program for managerial activities?" Since information on this point is not furnished, the question cannot be answered. However the uncertainty created by the raising of the question does provide a warning that definitions of terms is cardinal to satisfactory communication in the field of standardization.

Much more recent activity of the American Management Association reflects a demand for more and better standards applicable

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<sup>9</sup>Paul W. Dickson, Industrial Standardization, Company Organization, Practice and Procedures, Studies in Business Policy, No. 22, (New York: National Industrial Conference Board, 1947), p. 3.

to managerial performance. A typical treatment of this kind is provided as an illustration:

#### The Standards

This line of reasoning leads to the conclusion that proper measurement of performance requires performance standards. . . . The Committee has attempted to put this informal process down on paper, and to state a high standard for management performance in the important action areas. It is our experience that the best standards are not established on the initial attempt. They require periodic revision and improvement. It is more important to establish a reasonable standard on the first attempt than to postpone the use of this control process until technical perfection has been achieved.<sup>10</sup>

Still another document indicative of the increasing trend in standards of managerial performance is provided by the American Management Association's Management Personnel Development Research Committee.<sup>11</sup> It is of particular interest to note that the material was made available with the full understanding that any use or reference to it will be accompanied by an explanation that it is not finished.

It appears then, that the literature clearly indicates the increasing application of standards in all phases of managerial tasks, and that this process can by no means be considered a completed action.

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<sup>10</sup> Hugh J. Phillips, Jr., "Defining Objectives in Management Development," Management Planning and Manpower Development, General Management Series, No. 173, (New York: American Management Association, 1954), pp. 32-33.

<sup>11</sup> Lawrence A. Appley, Management and the American Future, General Management Series, No. 169, (New York: American Management Association, 1954), p. 20.

It further appears that there is no reason to believe that organizational problems are exceptions to the general rule.

This brief review has covered in outline a quickening awareness of the potentialities of managerial standards. And it may be noted that the later points of this progression are of quite recent date, and are sponsored by the American Management Association. As this society is one of the leading, if not the leading, agency in reflecting the needs of modern American industrial management, these pronouncements must be assessed highly. However, still more recent evidence is available of the continuing upward trend in management appreciation of many forms of standardization, and of an especial interest in a broadening of the scope of application of managerial standards.

One phase of this expanded concern is extremely significant to the theme of our inquiry. Until recently, almost without exception interest in managerial standards has been confined to "company standards," i.e. application to a single enterprise. Under the guidance of technical and engineering societies such as the American Society of Mechanical Engineers, The American Society for Testing Materials and many others, "technical" standards have long since progressed in large measure to industry standards, regional standards, and national standards. Since the organization in 1918 of the American Engineering Standards Committee, later renamed the American Standards Association, progress

toward the last named objective has been greatly speeded. This advance has followed establishment of regularized procedures for wider application of standards.<sup>12</sup> National standards set up in this manner are designated as "American Standards." It is now proposed to broaden the concern of the A. S. A. to include responsibility for standards in business practice and other fields, as well as in engineering matters.<sup>13</sup>

Another author points out that company standards are seldom unique; they are frequently identical in some respects, but sometimes in all characteristics with the standards of other companies.<sup>14</sup> The condition noted here is, of course, the characteristic underlying the possibility of the advantageous utilization of "organization standards" as defined in this paper. Evaluating this possibility is the objective of our inquiry. However, the term "company standards" in the cited work relates to various policies, practices, procedures, methods, technical terms, forms, etc., as separate elements of company administration. It is evident that the author did not envision the assembly of such items into an "organization standard" comparable to the concept of this study.

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<sup>12</sup>J. R. Townsend, "What is the Scope of the American Standards Association?" The Magazine of Standards, Vol. 27, No. 8, August 1956, p. 238.

<sup>13</sup>Ibid., p. 238.

<sup>14</sup>Dickson Reck, "National Standards in Industrial Administration," Advanced Management, Part I, Vol. XIX, No. 11, Nov. 1954, pp. 22-23.

It should also be noted that with respect to some of these elements, for example, technical terms and practices, much progress has already been made toward national standards under the sponsorship of pertinent technical societies. Nevertheless, the accomplishment is still far from satisfactory.

One final point will be made in this review. In view of the overwhelming force with which the budding nuclear age may shortly strike American industry, the American Standards Association has very wisely undertaken preparedness measures. This action is the establishment of a Nuclear Standards Board on 18 September 1956. Concurrently the Association authorized six projects. First priority was assigned to action on General and Administrative Standards for Nuclear Energy. It is probable that the very great number of industrial establishments presently engaged in atomic or nuclear work will fade into insignificance in comparison to the number so employed within a few years. In consequence this action of the Association seems very timely indeed. And the fact that first priority is assigned to the development of managerial standards is also a striking recognition of the heightened appreciation of their importance in the nation's industry, economy, and life.

In summation, it may be said that there is great and increasing appreciation by industrialists and writers on this subject that the techniques of standardization constitute a tool of industrial management

which offers great promise of increased productivity when appropriately applied. It is also evident, with respect to managerial standards, that the trend has increased sharply in recent years. Action by the American Standards Association in the nuclear field is strongly indicative of this trend.

## CHAPTER III

### COLLECTION OF DATA

#### Method of Procedure:

A common method of data collection is that of the direct contact survey. In typical practice of this kind an observer makes personal calls on selected establishments and records data on the subject under study. It is at once apparent that an extensive survey of this type is usually impracticable for accomplishment by a single observer, if the inquiry is multi-purpose, controversial, or requires resort to an appreciable number of separate sources of data.

Another type of field survey frequently utilized is that of a questionnaire usually mailed to the plants from which information is desired. In this method a considerable coverage can be attempted with relatively little effort. However, unless the questionnaire is extremely simple the returns will be few and incomplete.

The value to be placed on data received from either of these sources must, of course, be rated on an estimate of the competence and dependability of the person supplying it. In surveys of the first

type described above, an observer making a personal visit is much more likely to get attention from a responsible official with knowledge of the conditions inquired into. In any event an experienced observer can evaluate rather closely the validity of much of the data acquired during the plant visit. Replies to questionnaires, on the contrary, are frequently routine, tend toward indications of the planned rather than the actual situation, and, as a rule, are unduly optimistic concerning the existing conditions.

It seems evident that a field survey of existing practice in industrial organizations of a scope adequate to constitute any real claim as representative would be impracticable for an individual research. However, it is believed that pertinent data may be obtainable by other means.

In the past half-century, the quantity of literature dealing with various phases of industrial management, particularly in the journals and proceedings of technical societies and in texts, as well as in other books, periodicals, and papers, is stupendous; its volume challenges comprehension. This vast store of records of managerial theories and problems, their analyses, discussions on related matters, and remedial actions taken or recommended, may provide data pertinent to the specific problem of this study, and adequate for its solution.

Utilization of the literature as a source of information for this

study has some compelling advantages. It is copious, one might say inexhaustible; it is international in scope; and all of its pronouncements are in black and white, not subject to the many misinterpretations of oral communication, a common fault of personal surveys. Further, an individual who has taken the trouble to contribute to the literature is more apt to be conversant with the subject covered than many who provide casual comments when queried.

On the other hand, an investigator conducting an inquiry by examining the available literature, must rely completely on the language of the "reporting" individuals. Due to this circumstance he avoids completely the unreliability of replies to "leading" questions, a source of error long recognized by legal codes. Of course, in many cases the document may fail to deal with some questions which hold great interest for the investigator. And when information sought is given it is stated in the terminology of the author, with or without expressed definition. The investigator must then interpret the data in accordance with his own concepts of appropriate language. While this procedure involves possibility of misinterpretation, it has one important advantage over that stated above. This is, since there is but one interpreter, the results are much more likely to be comparable than would otherwise be the case. When such interpretations have been completed, however, consolidation into a small number of classifications remains as a

subjective process. It is definitely not an operation susceptible of meaningful statement in simple statistical terms.

There is still another disadvantage inherent in a research project restricted exclusively to the literature. For the purpose of our study we selected a "classification" of single plant manufacturing enterprises employing from 100-999 persons. This classification includes approximately 10% of the total number of manufacturing enterprises. Hence it constitutes a rather broad coverage; it is probably much more inclusive than will be considered desirable in classifications based on several factors, as described above in discussing the limits of the inquiry. This will follow from the desire to attain a considerable degree of homogeneity within each classification.

Accepting this condition as probable, it is at once apparent that much more specific data will be necessary to determine attributes for a more specialized classification than for the generalized one chosen for our research. In all likelihood - the literature will not serve as an adequate source of data for such a specialized classification. It is probable that the need can be filled only by an actual and extensive field survey.

However, considering the generalized nature of the "classification" selected and the personnel limitation for the research, the survey of the literature offers the only feasible method of approach.

This method will be followed.

**Scope of the Research:**

It is now the time to indicate in more detail the scope of the research necessary to collect data, which when assembled and analyzed, will provide a basis for determination of the questions raised in our inquiry. This task is undertaken below.

In the implementation of the decision, conformance with the limitations of the inquiry as set forth above, requires the selection of potential "attributes" to be considered. The term "attributes" is used to designate the separate elements, specifications, criteria, or other items which are being studied as possible component parts of an "organization standard" for a particular "enterprise classification." Stated conversely the attributes, when integrated, constitute an "organization standard."

Before presenting a detailed list of items for such a purpose, however, it is essential that some explanation be given concerning the philosophy of management underlying their selection. For the purpose of this study the writer accepts the concepts of the phase of management as cited in the preceding Chapter II; i.e. Planning, Organization, Command, Co-ordination and Control. It must be clearly understood, however, that the sequence of listing does not represent a time sequence of performance of the various functions. This classification is merely

a convention utilized as an educational aid in presentation of the problem. In reality, many managerial actions require the performance of functions pertaining to all of the separate phases named. One might compare the technique of this practice to that of a classical economist teaching the Theory of Equilibrium; that is, although he discusses in turn the effects of the forces of demand and supply, he eventually points out that market price is the result of a multitude of influences operating simultaneously in the market place.

In the further discussion then, since organization is but one phase of management, it is considered advantageous to continue the utilization of a similar technique of exposition. Therefore, it should be understood that the arrangement of the listed attributes do not constitute a time sequence. For example, although the top management policies of an enterprise underlie all activities of its concern, they must be "planned" and "directed" as necessary steps in establishing their validity. In general, however, those steps which are deemed of primary importance in establishing a new enterprise, or in initiating changes in an existing one, will be given precedence in treatment.

There is given below a summarized list of attributes believed to be appropriate for this purpose.

The attributes selected are:

ORGANIZATION STANDARD  
OF A  
MANUFACTURING INDUSTRIAL ENTERPRISE  
CLASSIFICATION - 100-999 EMPLOYEES

ATTRIBUTES

Summary

1. Legal authority for existence and operation.
2. Philosophy of top management.
3. Company objectives.
4. Resources available - men, money, and materiel.
5. General policies of top management.
6. Planning status.
7. Organization status.
8. Command.
9. Coordination.
10. Controls.
11. Personnel.
12. Materiel.
13. Operations.

For the purpose of providing greater clarity as to the significance of the various items than that which may be garnered from their mere statement in general terms, further definition and elucidation will be provided in the discussion of the individual items in a later chapter.

However, at this point, a reader may raise the question: Why the selection of the attributes listed? Are these the most important criteria for such a purpose? In the first place, it should be immediately apparent that the extent of coverage to be attributed to the various items will very largely be one of definition. Many of these attributes could just as well be shown in greater detail. For example; "planning" as here shown is construed to mean forecasting, prediction, short and long range planning, and research; "personnel" includes employment, training and development for both supervisory and non-supervisory personnel and also labor relations. There is no important significance attached to the number of separate items identified as attributes. It is to be expected that individuals making such a selection will vary widely in the extent and detail of their choice. Witness the record with respect to the selection of "principles" of management and organization, particularly the extreme view of Alvin Brown previously cited.<sup>1</sup> Since the research must be limited in some manner to keep within manageable

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<sup>1</sup> Brown, op. cit., pp. 255-264.

bounds, it makes little difference whether this be accomplished by coverage of but a single facet of the attributes as listed or be restricted to a limited number of a more detailed list of attributes.

Another point might be made that while the above argument might be valid for some of the attributes listed, there are other elements of major importance that seem to be omitted. For example: Why are markets not included? There is no doubt that markets are a fundamental concern of management. It was felt, however, that the problem of organization for this purpose is an extremely varied one in the enterprise classification under study. In consequence, it might present elements of much less homogeneity than the attributes selected for study. And it must be remembered of course, that the requisites for standardization are areas of similarity, not variances. There is no requirement for identical characteristics, of course, merely substantial areas of agreement within determined tolerance.

Specific mentions of other factors were omitted for similar reasons, although, of course, further more detailed research might warrant their inclusion. As a distant goal we aspire to a high level of quality, although we know that perfection cannot be attained in any standard, even an established one in extensive use. But in an exploratory research of the type here projected, the inquiry contemplates only that there may exist sufficient areas of a similarity to warrant consideration

of standardization. Sources of information used in the research are noted below.

Sources of Information:

The principal sources of information used for the collection of data are listed in the Bibliography. These documents and others examined in the course of the research were located by reference to the Industrial Arts Index, the Reader's Guide to Periodical Literature, The New York Times Index, indexes of journals of technical societies, bibliographies and specialized indexes included in the Bibliography, the card catalog of the University of Florida library, the Library of Congress, and personal files, and in addition thereto by suggestions of members of the Supervisory Committee and other faculty.

In the course of the investigation more than one thousand documents of widely varying types which held some promise of providing data pertinent to the inquiry were carefully scrutinized. Since many of these items were themselves surveys, some rather extensive ones, the total number of opinions and observations considered were greatly in excess of the number of documents reviewed. In each case the reference was examined with a view to identification and record of information pertaining to each item of the listed attributes. In many cases the document related to but a single item. In a very few cases the data provided nearly complete coverage. Most cases were intermediate but near the

lower level. Discussion of the results of the investigation and pertinent analyses will be presented in the chapters following.

Before commencing this task, however, it is considered necessary to note some of the difficulties to be anticipated in the research due to lack of precision in the usage of management terminology. This will be covered in the following section as a precaution helpful to a reader in avoiding pitfalls of misinterpretations.

#### Complex Problem of Terminology:

A writer on standardization in industrial management notes that standards travel under different names and adds: "Many standards in ordinary business practice are not called 'standards,' but are described by terms such as policies, objectives, budgets, organization manuals, product designs, recipes, operating methods, programs, technical terms, and procedures."<sup>2</sup>

In this situation perplexities in problems of interpretation must be expected. But this condition is not limited to standardization. It permeates the whole field of industrial management. In consequence the problem of interpreting the observations, comments, and arguments of the large number of contributors to the pertinent literature is a complex

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<sup>2</sup>Dickson Reck, op. cit., p. 20.

one. This is primarily due to the great diversity in the significance attributed by authors to terms commonly used. Of course, confusion in discussion of these subjects due to lack of uniformity in the terminology employed is by no means new. Almost every author or speaker discussing any phase of the subject at any length makes note of the problem and undertakes some explanation of the significance that he attaches to the terms used. In a paper presented at the Eighth International Management Congress in Stockholm, Sweden, a well known management consultant, Harry A. Hopf, has provided a pertinent illustration of a typical treatment on this point in relation to American practice.<sup>3</sup> The fact that Mr. Hopf considered discussion on this point appropriate in the agenda of an international conference certainly indicates that, in his opinion, the problem is a serious one. And demonstrating that poor practice in this respect is not confined to the United States, a distinguished British writer provides in considerable detail an excellent exposition of the problem involved.<sup>4</sup>

In recognizing this problem a British industrialist compares

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<sup>3</sup>Harry Arthur Hopf, Evolution in Organization During the Past Decade, (Ossining, N. Y.: Hopf Institute of Management, 1947).

<sup>4</sup>Edward Franz Leopold Brech, Management, Its Nature and Significance, 3rd Ed., (London: Sir Isaac Pitman and Sons, Ltd., 1953), p. 24 and pp. 33-43.

the situation to the "Tower of Babel" and questions the necessity for its continuance.<sup>5</sup> The General Motors Institute notes the existence of this confusion and tells its students that the Institute will endeavor to conform to usage in the business world and to the thinking of the leading writers on the subject.<sup>6</sup> These citations are representative of the many comments concerning the lack of uniformity in management terminology.

It is true that in discussions of restricted scope, it is usually feasible to reconcile stated definitions to one's own concept of the problem sufficiently to comprehend the views expressed. It is a very different matter, however, to obtain meaningful results in segregating the views of a large number of writers into a small number of classifications when the individuals have expressly provided definitions of the terms used, if the definitions have innumerable variations. Naturally the likelihood of securing a useful result will be further lessened if the significance to be attached must be implied by the reader. One thing is certain, there is no panacea. Careful analysis, although only a palliative, is nevertheless our most effective recourse.

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<sup>5</sup>Meyenberg, Friedrich, Industrial Administration and Management, (London: Sir Isaac Pitman and Sons, Ltd., 1951), p. x.

<sup>6</sup>General Motors Institute, Industrial Management, (Flint, Michigan: General Motors Institute, 1951), p. 1, Chapter 2.

**Data Required:**

The data required to enable resolution of the questions posed by the hypotheses of the inquiry may now be states as follows:

- a. Data adequate to warrant determination of the importance of the organization of industrial enterprises with respect to its bearing on the effectiveness of enterprise management and, in consequence, on the level of the national economy.
- b. Data adequate to warrant determination of the present level of management effectiveness as compared with goals considered attainable.

- c. Data adequate to warrant determination of whether or not sufficient intra-classification homogeneity is shown for the attributes selected for study, to indicate the feasibility of the utilization of "organization standards" as a means of improving organization. This same data, if adequate, will warrant designation of particular attributes.

For the purpose of determining feasibility, identical characteristics are neither to be anticipated nor are they necessary. Substantial agreement will serve the need.

The determination of "sufficient" and "substantial" as used above, is, of course, a subjective decision.

In the case of a separate enterprise presumably such a decision would be made up by the chief executive official; in the case of a regional or industry consideration the consensus principle with all interested

parties participating would probably be followed. Such action is customary in the procedures for the establishment of standards by the American Standards Association.<sup>7</sup>

Chapter III may be summarized as follows: The actual research will be confined to the literature, and primarily to the characteristics and relationships of the thirteen items selected as potential attributes. Major attention in most instances will be restricted to consideration of a major facet of each selected item. The many sources of information to be used are stated; the complex problem of terminology necessitates extreme caution in interpretation. The data required to enable resolution of the questions posed by the hypotheses of the inquiry are stated. The notation is made that determination of the feasibility of utilization of "organization standardization" as proposed must be a subjective decision.

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<sup>7</sup>Townsend, op. cit., p. 238.

## CHAPTER IV

### DISCUSSION

In the preceding chapter it was indicated that the data deemed necessary to permit resolution of the queries posed by the hypotheses of the inquiry pertained to three quite distinct premises, namely: the importance of organization; the present level of management effectiveness; and the feasibility of the utilization of "organization standards" as a means of improving organization.

Each of these matters will be covered in the order named, and in some detail; the discussion in all cases will be based on data obtained from research in the literature and upon deductions resulting from subsequent analyses of the material collected. In the discussions and analyses each writing which addressed itself to an exposition of any of the material which is the subject of our interest will be considered as a "respondent." In this connection, however, it should be noted that since the numbers of respondents to the different points of our interest vary widely, the results with respect to the various items are not directly comparable.

The first two of the premises cited above are matters which are treated rather extensively in the literature, and are frequently covered at length from different points of view in both formal and informal discussion of managerial problems and techniques. Therefore, their exposition here presents no perplexing problem. In consequence further introduction is unnecessary.

The third premise is a problem of a different order. As previously noted a new concept is involved. We require data adequate to permit a determination of the feasibility of the utilization of "organization standards" as a means of improving organization. As has been pointed out above, determination of this matter is a subjective action on the part of the individual or group making the decision. Intelligent action cannot be expected if the proposed usage is not thoroughly comprehended.

In this concept an "organization standard" composed of a number of "attributes" is prepared for a particular classification of enterprises. It is thought that such a device may be a material aid to the management of an enterprise included in that classification. The management might use it as a guide in building a new or in improving an existing organization.

Presumably each attribute specified would incorporate the accumulated expert knowledge presently available on the area covered, as determined by tested materials and practice. Naturally the more

specifically that each such item served the objectives and circumstances of the enterprise to which applied, the more valuable should be its application. It is equally apparent that the greater the homogeneity of enterprises in a classification, the smaller will be the variance of applicable enterprises from an appropriate standard. And also, it is evident, that the more fully the specified attributes cover the whole organizational requirements the greater will be the value of the "standard." In theory, of course, complete and exact coverage by a "standard" can never be reached, and in actual practice accomplishment may fall far short of such a condition. However, it seems clear that the utilization of such a guide would expedite the establishment of an organization and provide a more effective operating team. This would follow because, to the extent that the "standard" is applicable, the management would save the time and expense incident to developing appropriate means from "principles." And since the "standard" would be expected to incorporate the "best" usage as determined by highly qualified persons, it should in most cases be more efficient for the purpose for which designed than would be the arrangements determined by less qualified personnel.

In accordance with the concept as outlined above, an analysis will be made of the data which has been gathered relative to the potential attributes of an "Organization Standard" as listed in the preceding chapter. As there noted, the particular interest of the research relates to

a single plant manufacturing enterprise employing from 100 to 999 persons. In each instance the exposition will endeavor to demonstrate: (1) the current accepted practice of industry in the pertinent area; and (2) whether or not the practice seems to be based on logic.

We will now proceed to a discussion of our basic premises in turn, the first one being the Importance of Organization.

#### Importance of Organization:

A basic premise with respect to the importance of organization may be stated as follows: A sound organization, and particularly that of the upper levels of management, is a requisite for efficient operation of industrial enterprise; and the quality of the latter, in turn, is a major factor in setting the level of the company and national economy.

This premise has long been accepted by industrial executives and students of management. It may be said to have acquired the status of doctrine. A few typical quotations of various authorities covering the period since the inauguration of "scientific management" should be ample evidence of the validity of the tenets thus expressed.

Taylor clearly indicated his view on this topic in a manner that may be taken as a keynote:

Almost all of the directors of manufacturing companies appreciate the economy of a thoroughly modern, up-to-date and efficient

plant and are willing to pay for it. Very few of them, however, realize that the best organization, whatever its cost may be, is in many cases even more important than the plant. . . .

Harrington Emerson, a contemporary of Taylor who made many specific contributions to "scientific management," was very emphatic on this point: "The industrial hookworm disease is defective organization."<sup>2</sup>

Mary Parker Follett, a distinguished writer in the field of business management observes: "organization is the word most often heard today in all discussions of business development. The greatest weakness in most industrial plants is seen to be organization."<sup>3</sup>

In much greater detail, the necessity for a sound plan of organization and its fundamentals, are set forth by Dr. Paul E. Holden of Stanford University in his research study of thirty-one leading industrial corporations. The group includes many of the "blue chip" companies of America, the number of employees per company ranging from 5,000 to 70,000. Of specific application to the point under consideration here is the statement: "Top executives, no matter how competent, cannot function

<sup>1</sup>Frederick Winslow Taylor, Shop Management, (New York: Harper and Brothers, 1911), pp. 62-63.

<sup>2</sup>Harrington Emerson, The Twelve Principles of Efficiency, (New York: The Engineering Magazine Company, 1913), p. 29.

<sup>3</sup>Mary Parker Follett, Dynamic Administration, Henry C. Metcalf and L. Urwick, eds., (New York: Harper Brothers, 1940), p. 144.

without a sound plan of organization."<sup>4</sup>

In somewhat similar vein, but on a much broader base including many small companies, is a research study conducted by Ernest Dale under the auspices of the American Management Association. In the course of its research the group examined and analyzed several hundred organization charts and organization manuals, and contacted scores of outstanding thinkers and practitioners on organization. The author comments: "The value of organizational knowledge in improving the accomplishment of the firm's economic and non-economic objective goes a long way toward explaining its importance."<sup>5</sup>

The views of a well known management consultant are expressed precisely and succinctly: "The real strength of a company lies in its organization."<sup>6</sup>

As a further comment on this point it may be helpful to recall that the eminent economist, Alfred Marshall, valued Organization so highly that he pondered classifying it as an agent of production along with Land, Labor and Capital, the long accepted triumvirate in classical

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<sup>4</sup>Paul E. Holden, Lounsbury S. Fish, and Hubert L. Smith, Top-Management Organization and Control, (New York: McGraw-Hill Book Company, Inc., 1951), pp. 5-6.

<sup>5</sup>Ernest Dale, Planning and Developing the Company Organization Structure, (Research Report No. 20), (New York: American Management Association, 1952), p. 15.

<sup>6</sup>Trundle, op. cit., p. 22.

economic theory. He wrote: "it seems best sometimes to reckon Organization apart as a distinct agent of production."<sup>7</sup>

Professor Balderston provides specific coverage on this point:

#### Organization Structure

Organization, dealing as it does with human relationships, is at once the most intriguing and the most difficult of all phases of management. In spite of the difficulty of comprehending its nature, organization must be recognized as the most important of all the means of direction and control that the chief executive of a business has at his command.<sup>8</sup>

Another reference, of especial note here because of its thorough coverage of the several representative points of view on the subject of our primary interest, was published by the Carnegie Institute of Technology.<sup>9</sup>

This document is a complete report on a round-table discussion held at the Institute at the time of the dedication of the newly established Graduate School of Industrial Administration. The subject of the discussion was "Horizons and Problems" in the area of fundamental research in administration. The panel included twelve of the nation's leading business administrators, graduate educators, and researchers as well as

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<sup>7</sup>Alfred Marshall, Principles of Economics, Eighth Edition, (New York: The Macmillan Company, 1953), p. 139.

<sup>8</sup>Balderston, op. cit., p. 447.

<sup>9</sup>Carnegie Institute of Technology, Fundamental Research Administration, (Pittsburgh: Carnegie Press, 1953).

representatives of Carnegie. The discussion was predicated upon a memorandum circulated to the participants prior to the discussion, in which were stated some questions deemed to be representative of matters requiring priority attention. The meeting, it may be said, constituted something of a keynote as to the areas of learning to which the new school might most advantageously apply the means placed at its disposal. It is interesting to note that all three of the series of questions posed for discussion dealt largely with features of industrial organization. The first of these, possibly most closely allied with the field of our investigation, deserves particular attention as an indication of the wide acceptance of the importance of the problems involved. It is quoted for consideration.

1. What are some of the central problems faced by top and middle management? Some areas that suggest themselves are: the problem of effective organization structure; the relations between formal organization structure and actual organizational behavior; executive development; the making of decisions with incomplete information; the problem-solving process in executive decision-making; and the role and importance of face-to-face negotiation in labor relations.<sup>10</sup>

And, speaking at the dedication ceremonies, Mr. Sidney A. Swensrud, President, Gulf Oil Corporation, included in his address an extremely pertinent summary of the relationship of high quality professional management to the national economy.<sup>11</sup>

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<sup>10</sup> Ibid., p. 20.

<sup>11</sup> Ibid., p. 5.

It is believed that the preceding comments are truly representative of the awareness of educators and industrialists of the importance of organization in the efficient operation of industrial enterprise. But much more impressive on this point, is the experience acquired by all individuals who participated in the problems of the military services incident to the urgencies of large volume war time military procurement of certain non-commercial items. To meet such requirements, it was frequently found necessary to award contracts to companies with top grade management organizations, although in some cases the selected company had no suitable production facilities or sites, no previous experience in the type of manufacturing involved, and no technical specialists trained for such production. A high standard of organization outweighed all such deficiencies and achieved quantity and quality production in remarkably short periods of time.

The above citations are representative of the whole, but actually cover little more than an infinitesimal fraction of testimony which is available concerning the importance of organization. But the requirement for organization is certainly not new. Moses was well aware of the need and acted accordingly.<sup>12</sup>

Adam Smith's exposition of the "division of labor" is merely an

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<sup>12</sup>Ex. 18: 25, 26.

excellent portrayal of a fundamental of organization.<sup>13</sup> And many eminent scholars have discoursed in similar vein. Why then, a reader may query, do we have so much citation and reiteration? Is this not belaboring the obvious? If agreement is so general why not assume a fait accompli and drop the discussion?

The answer to such questions, and an extremely conclusive one, is that organization is not an end in itself; it is merely a means to an end. Our study relates not merely to some theoretical concept as an idea for debate alone; it purposes action to improve productivity in actual industrial operations. And unfortunately, in spite of the general concurrence as to the immense value of sound organization in business enterprise, and notwithstanding its advocacy by the devotees of "scientific management" and the related teachings of its "principles," the record of accomplishment leaves much to be desired. This dissertation undertakes the study of "Organization Standards" as a possible means for improvement in the effectiveness of "on-the-job" industrial management.

Consideration will now be given to the record of actual performance.

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<sup>13</sup> Adam Smith, Wealth of Nations, The Harvard Classics, Vol. 10, (New York: P. F. Collier and Son Company, 1909), pp. 9-23.

**Current Management Effectiveness:**

The discussion to be pursued here will relate to the following basic premise:

The current degree of management effectiveness achieved by the great majority of industrial enterprises falls far short of desirable goals. This unsatisfactory situation obtains in spite of the devoted efforts of Taylor, his associates and later disciples throughout the past half century, in their endeavor to raise the level of management accomplishment by teaching the application of principles.

The existence of this fundamental condition is well known to all students of management. Frequent reference to this situation has been made by writers on the subject throughout the last half century. It has been made the subject of investigation by boards or commissions of many different agencies. A few of the representative findings may be noted.

Taylor gave as his purpose in writing Scientific Management the great loss which the country was suffering from inefficiency, and the need for systematic scientific management as a corrective action.<sup>14</sup>

The Committee on Elimination of Waste in Industry of the Federated American Engineering Societies made an intensive study in

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<sup>14</sup>Frederick W. Taulor, "The Principles of Scientific Management," Scientific Management, (New York: Harper and Brothers, 1947), p. 7.

this area in 1920. The membership of seventeen included such well-known advocates of efficiency as L. P. Alford, Morris L. Cooke, Harrington Emerson, and Herbert Hoover. As the first factor in the enormous waste observed, the report cited: "Low production caused by faulty management of materials, plant, equipment, and men."<sup>15</sup>

In 1933, under the auspices of Columbia University, a committee of distinguished economists conducted a study of the waste involved in the inefficient utilization of the productive capacity of the country. This study was pointed primarily at the hindrances to potential productivity incident to economic maladjustments, rather than to managerial failures incident to organization, appropriate application of resources, coordination, and control of operations. However, the great gaps between the standards of productivity of the most and least efficient plants are made glaringly apparent in the conditions reported.<sup>16</sup>

In more recent years, a research study conducted under the auspices of the American Society of Mechanical Engineers reports that what small plants need most in the future is: "First and foremost,

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<sup>15</sup> American Federated Engineering Societies, Committee on Elimination of Waste in Industry, Waste in Industry, (New York: McGraw-Hill Co., Inc., 1921), p. 8.

<sup>16</sup> Columbia University Commission, Economic Reconstruction, (New York: Columbia University Press, 1934), pp. 87-88.

improved management. . . .<sup>17</sup> Surely the only logical conclusion that can be reached from such data is that the need for better management is great and current.

Some other comments may be helpful to an understanding of the extent of this condition.

Professor Moore cautions against surprise:

. . . there are many degrees of excellence and lack of excellence in the quality of managerial ability in manufacturing companies. The student should not be surprised to find that there are many companies which are by most standards, poorly managed. . . . Good management is by no means universal. There are probably more poorly managed companies than well managed ones.<sup>18</sup>

A consulting engineer has estimated that over 75% of the problems brought to management consultants arise from defects in organization structure.<sup>19</sup>

Professor Gardner, in discussing specialist qualification employees of industrial organizations, including those in key positions, states:

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<sup>17</sup>American Society of Mechanical Engineers, op. cit., p. 472.

<sup>18</sup>Franklin G. Moore, Manufacturing Management, (Homewood, Illinois: Richard D. Irwin, Inc., 1954), pp. vii, 45.

<sup>19</sup>Harold V. Coes, retired vice-president Ford, Bacon and Davis, Inc., as quoted in R. E. Gillmer, A Practical Manual of Organization, (New York: Funk and Wagnalls Co., 1952), p. 3.

As a consequence, we find business organizations frequently managed in a lop-sided way and reflecting the background, interests, and points of view of the particular management group in power.<sup>20</sup>

It may be said that many of these comments are in general terms that fail to give the reader the assurance of facts. That is, they lack definiteness and precision in detail.

There is, of course, an evident and major obstacle to optimism that many explicit and detailed examples may be found in the literature in support of the stated premise. This deterrent is reluctance of the responsible managements to permit the publication of any material which reflects on the competence displayed in their actions. It is understandable enough that managements are not desirous of disclosing and publishing their deficiencies. Such action would have adverse effects on the whole enterprise as well as on the particular management personnel specifically involved. Nevertheless, this attitude of management, however understandable, is largely responsible for the paucity of information of the kind here sought.

It is true that there are a great many so called "case studies" which frequently purport to describe in great detail the circumstance of a particular enterprise. In the general pattern of this type of exposition,

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<sup>20</sup>Burleigh B. Gardner and David G. Moore, Human Relations in Industry, 3rd Edition, (Homewood, Illinois: Richard D. Irwin, Inc., 1955), p. 22.

the relation commences with a situation disclosing a very low standard of management performance. Corrective action along generally accepted lines is then initiated, and presently, as we arrive at the end of the report, we find that the corrective action taken was appropriate to the occasion. In consequence, we are now pretty well "regulation" in every way.

A particular disadvantage in case studies of this type is that they are "disguised." In other words, names and titles of individuals, data as to location, and much other detail which it is believed might disclose the identity of the enterprise or of individuals, is either reported fictionally or omitted altogether. The extent of the disguise is, of course, a matter determined by the researcher. It is believed that the "Yankee City" series of six volumes is representative of this group. This series is based upon research conducted by Professor W. Lloyd Warner, of Yale University, and a staff of nineteen assistants. The full research was sponsored and financed by the Committee on Industrial Physiology of Harvard University. Perhaps Volume IV of the series, The Social System of the Modern Factory, which reports on the "Yankee City" shoe factories, is of the greatest interest in our consideration.<sup>21</sup>

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<sup>21</sup> William Lloyd Warner and J. O. Low, The Social System of the Modern Factory, (New Haven: Yale University Press, 1947).

It is not meant to imply by this comment that reports of this type are not valuable. The contrary is true. The particular document cited here is considered well worthy of study by students of management. Rather, it is meant to point out that in the process of applying the "disguise," the writers frequently deform or discard data of extreme importance to a real analysis of the situation by a reader. All experienced observers are well aware that things unsaid are frequently more valuable in diagnosis than the specific information given; that much apparently irrelevant material, picked up from varied sources with known inter-relationships, may well point the way to the real problem. Without such material a reader has little choice to do otherwise than follow the line presented by the writer, and hence arrive at the same solution.

Distinct from presentations of this kind, there are some cases reporting the effectiveness of top managements in which no disguises are utilized. These surveys, however, usually cover situations which are considered well above normal efficiency, and hence most of the comments of the researcher at the close of his study can properly be laudatory. A case-study of the Studebaker Corporation under the auspices of the University of Chicago falls into this pattern.<sup>22</sup> These reports, of course, must be given some weight as opposed to our immediate premise.

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<sup>22</sup>Frederick H. Harbison and Robert Dubin, Patterns of Union Management Relations, (Chicago: Science Research Associates, 1947).

A close relative of the preceding type of case study may be classed as a 50-50 proposition. This is one in which it is shown that management has been tabbed for some deficiencies, but that other parties, usually unions, have also been at fault. Presumably release of a report of this nature might have some propaganda value by management in future operations. In other words, it might be used to demonstrate that the errors of all concerned had been identified, and that appropriate corrections were to be applied. It is quite possible that such action could be inspiration for improved morale. A report on General Motors, also authored by Professors Harbin and Dubin, seems to represent this type. The report notes:

It is necessary to add that General Motors Executives and U. A. W. officials expressed disagreement and alarm at the manner in which the subject matter of Chapter II (Corporation and Union Programs and Strategies) is presented. Each seemed to feel that "the other side" was treated in too favorable a manner.<sup>23</sup>

There is still another type, probably quite rare. In this type the report is completely factual and in considerable detail. Only one "case study" that can be so classified was located in this research. However, it constitutes such an important document for careful study, that some further comments with respect to it are warranted. It is a study covering several years of operation of the Chicago plant of the

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<sup>23</sup>Ibid., p. vii.

Inland Steel Container Company.<sup>24</sup>

This plant falls in the size classification of our major interest as the average number of employees during the period covered was approximately 550. Initially a private family owned the corporation; it was acquired by the Inland Steel Company in March, 1939, and operated subsequently by the Inland Corporation as a wholly owned subsidiary. The survey report indicated that no material change was made in the products, processes, or number of employees.

In so far as the main theme of this case report is concerned, it follows quite closely the first type mentioned above. That is a company in deplorable condition due to bad management, is provided with a management operating in accepted modern practice. The result is a very rapid rise in productivity as the increase in morale of the work force plays its part. All of this is well documented, and carries conviction to the reader for the period stressed.

However, the completeness and detail of the data furnished endow the case study report with another characteristic. Lawyers and other persons experienced in the procedures of trial courts, know that evidence presented in a lengthy court case frequently discloses conditions quite distinct from those pertaining to the case being heard.

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<sup>24</sup>William Foote Whyte, Pattern for Industrial Peace, (New York: Harper and Brothers, 1951).

Frequently this other matter may be of far greater moment and concern to the authorities than the subject matter of the current trial. And it often implicates in reprehensible conduct, the very person or persons responsible for initiation of the case at bar.

In perusing the report of the case study under discussion, a careful reader is thoroughly impressed with the excellence of the presentation. He will agree fully with the comment of Professor Whyte with respect to the eventual improvement effected that: "Such a profound change coming about so suddenly is seldom found in any organization."<sup>25</sup> But he will also be amazed that the deplorable conditions cited at the time Inland Steel took control in March, 1939, continued with little change for so extended a period.

Further consideration of this case is not believed to be warranted here. However, a reader who does not consider the data presented above as sufficiently indicative of inefficient management may find convincing evidence in Dr. Whyte's excellent report. Of course, the condition reported is not typical of the majority of American industrial enterprises. It is cited merely as a factual account of an extreme case. But such cases of which one has knowledge certainly do emphasize the need for thoughtful attention to the problem of improvement in industrial organization.

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<sup>25</sup>Ibid., p. 65.

The above is considered an adequate discussion of the point at issue; i. e. the wide extent of an unsatisfactory level of industrial management. It will be assumed in the further discussion that the basic premise cited at the beginning of this section has been established as truth.

**Potential Attributes of an Organization Standard:**

Single Plant Manufacturing Enterprise, 100-999 Employees

**1. Legal authority for existence and operation.**

If we are to assist the management of an enterprise in this classification to establish the organization, the proper place to start, it would seem, is the consideration of necessary legal authority. The United States prides itself on possessing a government of law and not of men. In what way does this affect management of our enterprise?

An industrial enterprise is but one form of "institution" in a society among countless numbers of other "institutions" of many kinds. These institutions are composed of different groups of individuals and serve widely varying needs. Consequently clear legal authority is necessary as a basis for the functioning of an industrial enterprise so that the rights of all members of the society, both internal and external to the enterprise, may be given appropriate consideration. Thus it seems evident that legal authority for existence and operation is fundamental to each and every activity of an industrial enterprise. We must

comply with the law; but just what action must we take? Do we have any choice in method of compliance? And if so, which procedure is most advantageous in the particular circumstances of an enterprise in this classification?

The necessity for a legal basis for the functioning of an industrial enterprise has long been recognized. This need has crystallized into a very few forms in extensive use. The three most common forms, i. e. the sole proprietorship, the partnership, and the corporation constituted approximately 99% of the total number of manufacturing enterprises in the United States in 1947.<sup>26</sup>

The remaining 1% includes a variety of forms such as cooperatives, joint-stock companies, and the common-law trust. The significance of these forms is minor and they will be disregarded for our present purpose.

Most writers on industrial organization who provide a general coverage of the subject, include a somewhat detailed description of the three principal legal forms, with a listing of the advantages and disadvantages of each in different applications. Some writers furnished descriptions of the less common forms. Only a very limited number of authors discuss the quantitative relationships in the use of the various

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<sup>26</sup>U. S. Bureau of the Census, Census of Manufacturers, 1947, (Washington: Government Printing Office, 1950), p. 149.

forms. This type of discussion, as a rule, merely noted that the utilization of the corporate form has become increasingly common in the last half-century. Such information is not adequate to our purpose.

However, the Census of Manufactures does provide data pertinent to our inquiry, although it does not completely cover the point at issue, i.e., the ratio of corporate and non-corporate legal forms of organization for single plant establishments employing 100-999 employees to the total number of establishments in that classification. By reference to data compiled by the Bureau of the Census concerning the "Number of Establishments, Classified by Legal Form of Organization, All Manufacturing Industries," and "Establishments Classified as to Size by Number of Employees, All Manufacturing Industries,"<sup>27</sup> it may be noted that in the classifications 1-99 employees there are 93,596 establishments in excess of the total number of establishments which are non-corporate in form.

These data, of course, do not prove that all establishments employing 100 or more employees have adopted the corporate legal form. They do imply that the number of corporate institutions in that employee classification constitute all but a negligible fraction of the total.

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<sup>27</sup>Ibid., pp. 149, 97.

Accepting the essential unanimity in the utilization of the corporate legal form of organization as here demonstrated, in so far as it pertains to enterprises of the kind and size under study, some examination of the logic of this practice is warranted.

The usual practice of writers on the subject of the legal form of organization employed in manufacturing enterprises, has been noted above. This is to list certain advantages and disadvantages of the three most common types, i. e. the sole proprietorship, the partnership, and the corporation. Our particular concern here is with the last named type, and especially with two advantages of this form which are almost always cited as of predominant importance. These two items are: (1) the ability to obtain capital funds, and (2) the feature of limited financial liability.

If we first consider the circumstances of the giant enterprises of this country, it is at once evident, that the capital outlay represented in the necessary facilities is far in excess of the financial capabilities of an individual. And the likelihood of the association as partners, of a small number of individuals of sufficient wealth to finance such an enterprise, is almost equally remote. Surely the most casual contemplation of the capital assets of the General Motors Corporation, for example, is utterly convincing on this point. The existence of a very few narrowly owned enterprises which have grown to great size,

does not negate this concept in any significant degree. Perhaps the outstanding example of this latter situation is the Ford Motor Company, until recently a family-owned private corporation. Even here, the change to the status of a publicly owned corporation was due in large part to the need for a broader base of capital financing.

It is clear then, that with respect to very large manufacturing enterprises, the demand for capital funds is so great that only the corporate form of organization is adequate to the need. Stated differently, it may be said that the characteristic of superior financing is compelling in the choice of the legal form of organization for enterprises of great size.

However, the limited liability feature of the corporate form is also, in effect, an absolute requisite for enterprises in this category. This follows from the enormous risk of loss in the personal fortunes of the owners, possibly approaching destitution, if an enterprise lacking this safeguard suffers severe losses or becomes insolvent. Such an organization would possess all the bad traits of a condition portrayed by the ancient adage: "all the eggs in one basket."

If we now turn to consideration of enterprises of differing sizes in a descending scale, it is evident that both of the items discussed above long remain extremely potent elements for management consideration. However, both of them continuously decrease in importance. Eventually,

at various stages dependent upon many factors such as the capital outlay required, the stability of the products involved, the degree of risk inherent in the processing and marketing, the temperament of the owners or managers, and many other relevant matters, the importance of the advantages inherent in the sole proprietorship or the partnership will be deemed to outweigh the advantages of the items discussed above and other advantages of the corporate form. One of these other advantages, that the continuity of corporate life is not affected by death or incapacity of officers, is of major importance. However, as it is applicable to all corporations without regard to size, it is not germane to this argument.

It might appear that in many cases the emergence of the sole proprietorship as the preferred form would occur before the lower limit of the enterprise classification under study has been reached. However, at this point a further advantage of the corporate form must be weighed, for the legal form of organization has an important bearing on the growth potential of an enterprise. The aspect of growth potential with respect to company organization seems to have been largely overlooked by writers on the subject. One important exception to this condition is worthy of note here. In his treatment of the problem of management succession, Christensen recognizes the importance of growth

potential.<sup>28</sup> But in actual operations, in marked contrast to the literature, industrial management seems to have fully recognized its importance and has acted accordingly.

The significance of a high growth potential in an enterprise organization warrants much more detailed exposition than is feasible within the limitations of this paper, for its establishment and maintenance necessitate consideration in every phase of organization. Its importance is not at all limited to the attribute of organization which is now being discussed. But since the adoption of a legal form of organization is the initial positive step in building an organization, some discussion of the mutual relationship of growth potential and legal form of organization is essential here.

It is a well-known fact, of course, that almost without exception, all of our present large and medium size successful industrial companies commenced business as very small enterprises. And bearing in mind that our subject is limited to enterprises having from 100 - 999 employees, it seems a safe assumption that the vast majority of the top management of these companies are intensely concerned with potential growth. They have, in most cases, reached their present status by

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<sup>28</sup>Carl Roland Christensen, Management Succession in Small and Growing Enterprises, (Boston: Graduate School of Business Administration, Harvard University, 1953).

growth from much more modest beginnings. They are proud of their accomplishments. They have already passed many competitors in their passage upward. They know that, in general, larger companies have better opportunities for greater service and larger returns. They know that the primary concern of top management is with the future, and that the supervision of current operations should be largely entrusted to lower management, on the basis of policies, procedures and directives previously promulgated by top management. They possess initiative and energy.

On the other hand they are not prophets, they possess no crystal ball. They are well aware that any forecasts which they make are estimates only, and cannot be exact. In these circumstances it is essential that current arrangements be made to meet future contingencies, subject of course to justifiable expenditures. More specifically, with respect to our immediate topic, top managements are well aware that larger manufacturing enterprises are almost exclusively corporate in form. They appreciate the greater freedom usually enjoyed by professional management under the corporate form. They know that if prospects for additional business arise, there is almost always a prompt delivery date specification, and often a premium for expedited delivery. They know, from sad experience, that organization changes must be made carefully and as gradually as is compatible with the need. Abrupt changes in personnel relationships are certain to disrupt organizational functioning.

For these reasons progressive minded top managements seek to provide an organization form suitable for effective future operation. One step in this direction which may be taken by small companies, is the establishment of the corporate legal form, even if current circumstances do not demand such action. The need for facilitating future expansion, without doubt, is a very potent incentive for top management to select the corporate form. And it is believed that the consequent implementing action explains, in large measure, the extensive use of that form in the smaller enterprises of the classification under study.

The reader is reminded that the classification under study includes only single plant manufacturing enterprises within the range of 100 to 999 employees. A general discussion of the corporate vs the non-corporate form of business concern is not contemplated here. If such a task were undertaken a number of other advantages of incorporation should be cited in addition to the three major ones mentioned above, i.e., availability of capital funds, limited financial liability, and provision of growth potential. For example, the feature of continuity of corporate life, mentioned incidentally in the above discussion, is inherent in the corporate form regardless of size. Facilitation of legal control by professional management with a relatively small share of ownership, and the consequent simplification and expedition of administrative actions are likewise significant advantages of the corporation. Disadvantages also

attach to the corporate form. Probably the most important of these are the greater relative expenses due to the costs incident to incorporation, and much more to the continuing tax liabilities of the corporation. However, in the enterprise classification under our immediate study, it is believed that one or more of the three major characteristics cited above are compelling.

It must be appreciated, of course, that classification of enterprises by number of employees is by no means an ideal concept for considering the problems of organization. Such a concept implies that all organization problems are closely related to employee strength. In certain instances this is far from the case. The most notable examples of divergence from a general pattern are probably in the bulk chemical industries. Here, in some cases where existing practice is approaching "automation," the capital invested in facilities is enormous in relation to the size of the employee force as compared with most manufacturing processes. It seems evident that in specialized manufacturing of this nature the justification for the corporate form would extend to enterprises in lower employee strength classifications, than would be the case for companies of the more normal pattern. This follows, naturally, from the greater relative importance of the features of capital acquisition and financial liability limitation. Nevertheless, employee strength appears to be the most useful single characteristic available as a basis

of classification for this type of study.

The above example is illustrative merely of one type of divergence from the more common relationship of employee strength and other features of organization. There are many others, usually much less in degree. This example, however, constitutes ample evidence that the problem that we are considering involves complex and variable relationships between pertinent characteristics.

Our particular research relates to enterprises in the 100 - 999 employee grouping, and we may note from the census data cited that there are 93,596 enterprises in excess of the total number of establishments with 100 or more employees. Thus it appears that in actual practice the need for the corporate form of organization has been found to be compelling far below the lower limit of our study. In consequence, it seems clear that the corporate legal form of organization must be considered a requisite for enterprises of the classification here considered. The possibility, indeed the probability, that due to special circumstances a very few business concerns of this type might operate advantageously on a non-corporate basis, does not negate this conclusion. Therefore, the corporate legal form of organization is deemed to constitute an essential and primary attribute of sound organization in the classification of industrial enterprises being examined.

But a reader may comment that he does not consider the legal

form of organization as a principle of organization. The comment is irrelevant. No such designation has been applied in this discussion. The important matter is that an essential initial action is necessary; an enterprise may be an idea, but it cannot function until legal authority has been obtained. No doubt there is general appreciation that some form of legal authority is required; but management needs to know what form is required for a particular enterprise, and that question is subject to debate. In present custom, of course, a manager will presumably study the advantages and disadvantages of the various forms as set forth in innumerable texts as a means of determining which best suits the needs. The very superfluity of advice may merely confuse him. And of course he may consult a lawyer. But here it is proposed to give him a simple definite, positive specification as to the proper action to take. All he has to do is refer to the "Organization Standard" of the pertinent classification.

Other readers may indicate that such a specification has no value. In justification for this point of view one may say it simply is not true that the corporation is necessarily the best legal form for enterprises of this classification. He may assert that he knows of a successful company that is not a corporation.

In our guise of philosophers searching for the truth, of course, we must be wary of statements unsupported by evidence. Perhaps this

reader is relying on some anecdote passed on to him by others. We cannot accept hearsay as evidence. Perhaps he is relating some situation that he himself recalls, but is his memory on this point reliable if he has not refreshed it? Does the instance he has in mind cover a case in the enterprise classification we are discussing? If not, it is not germane to our present problem. In some classifications with a less number of employees than that of our study there will, of course, be many thousands of successful non-corporate companies. We must have evidence as to the facts: we insist that mere assertion is nugatory.

But possibly the reader is quite right. He does know of one, or even several, successful non-corporate companies in the classification we are studying. That does not negate our decision. We do not maintain that all companies in this classification must be corporate to be successful. We conclude only that the great preponderance of enterprises do rely on that legal form as most advantageous in their circumstances. On this point the evidence is conclusive.

Another reader, agreeing that this attribute has no value, may state a different reason for his thought. "It is obvious," he says, "everybody knows that the corporation is the dominant form." This position may be tenable for many persons familiar with the problem, in so far as the classification we are studying is concerned. Certainly it is common knowledge that the incidence of the corporate form is much

greater in large than in small companies; and companies employing 100 - 999 persons may be considered as rather "large" in this regard. There can be no doubt that to a person who has consulted the census figures furnished above it must seem obvious that practically all companies in this classification must be corporate in form.

But readers should remember that we are concerned about "standards" for all classifications of enterprises. Our present limitations of the research to companies with 100 - 999 employees was dictated solely by practical considerations. Thus while a correct decision on the nature of this attribute for the classification of our research may be obvious, the answer to the same question for a smaller classification, say 10 to 19 employees, is by no means evident. A correct answer to the question, nevertheless, remains a matter of urgent concern to management. We adhere, therefore, to our previous conclusion that the legal form of organization, in this case the corporation, should be considered as an attribute of an "organization standard."

## 2. Sound philosophy of top management.

Again we have a problem of semantics. What does this title signify? Does top management have many philosophies applicable to different fields? Or is there but one philosophy with a variety of facets? In fact there is little difference in either of these views. One view implies the other. The relationship is comparable to that expressed

by Professor Wilbert E. Moore with respect to organization and quoted previously.<sup>29</sup>

In this discussion we will refer to facets of the topic.

The concept of "philosophy" is:

. . . love of wisdom or knowledge . . . especially that which deals . . . with the most general causes of principles and things; . . . moral or study of principles of human action or conduct.  
<sup>30</sup>

The term top management was defined in Chapter I above.

What is a suitable facet of this attribute for discussion here?

No doubt the first one to come to mind of a majority of persons interested in management is that of profit. There can be no doubt that a sound profit philosophy is an essential element of top management concern; it is fundamental to the whole theory of private enterprise. It is quite probable that in the not very distant past many economists and industrial leaders considered it the only important phase of top management philosophy. Even Taylor, although he demonstrated in many ways his concern for fair treatment of employees, stated in his "Shop Management": "All employees should bear in mind that each shop exists first, last, and all the time, for the purpose of paying dividends to its owners.<sup>31</sup> It is

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<sup>29</sup>Wilbert E. Moore, op. cit., p. 72.

<sup>30</sup>The Concise Oxford Dictionary, op. cit.

<sup>31</sup>Frederick Winslow Taylor, "Shop Management," Scientific Management, (New York: Harper and Brothers, 1947), p. 143.

granted that this statement is subject to different interpretations. Certainly, in the sense that, in the long run, dividends are indispensable to the very existence of a business, no one who believes in the system of free enterprise will deny. But such a statement, unaccompanied by reference to the interests of other persons or groups contributing to the success or lack of success of a company, presents a strong inference that the author considers profits to be the only concern of owners and managements. The points of view of industrialists and educators as to appropriate methods of expression on this topic have changed in recent years, but, of course, there is no departure from the basic fact that profits, or hope of profits, are the keystone of the whole structure.

Accepting then, the essentiality of a sound management philosophy with respect to profits, let us return to the previous question. Is this a suitable facet of the topic for consideration as an attribute of standardization? The answer is definitely, decisively, decidedly no. This follows from the relationship of profits to the whole structure of the free enterprise system of economy.

The idea of a fixed or standard profit is entirely incompatible with our economic system. The success of a free enterprise economy is based on the initiative of the entrepreneur, the owners or top management under pressure from the owners, in undertaking and energetically prosecuting efficient processes of production. The primary

incentive in this effort is high executive compensation for management, high profits for the owners. In the absence of satisfactory profits, no management can for long retain its status. Risk capital is supplied only in view of expected returns which are proportionate to the estimated risk. A standard return, however computed, would negate the whole economic system in both theory and practice. We must discard the idea of a standard in this facet of top management policy.

Let us consider then some other facets of this attribute that may offer more promise for our purpose. We cannot forget management's responsibilities to owners, but there are many other matters that require attention. Is management philosophy on labor-relations a suitable choice? It certainly is of major importance in the success of an enterprise. Perhaps we should consider some of the following: employee relations, including executive personnel; customer relations; supplier relations; community relations; and relations with various echelons of government.

Many other important concerns of management could be considered as phases of the items listed, for example: a philosophy relating to "minority groups" and to the employment of women. Still other matters might concern the application of "automation," or for that matter the incorporation of labor saving machinery into the processes of production on a scale not warranting that special

appellation, but nevertheless of great significance to many employees and even to the community.

Such detail could be extended indefinitely; however, the reception of these items brings to mind a common characteristic of almost all of them. They involve relations of top management with people. In other words, to use the parlance now current in managerial discussions, we are indicating a concern for "Human Relations." That the recognition of this common characteristic has not always been accepted as obvious, is evident from the comment of a highly successful industrialist:

As I watched business grow, I became convinced that human relations, public relations, customer relations and employee relations are all one and the same thing. Why has it taken us fifty years to find this out?<sup>32</sup>

Nevertheless, this view is now widely accepted. In consequence it seems to offer an excellent topic for consideration as a facet of the philosophy of top management. On that basis we will undertake a discussion of "Human Relations."

All societies and all institutions are dynamic. They rise and they decay; they are not static. The "stationary state" is a useful concept in theoretical discussion but it has no counterpart in real life. We have cited above the necessity for a legal basis for functioning of

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<sup>32</sup> Frederick C. Crawford, "Creating the Proper Climate," How to Increase Executive Effectiveness, ed. Edward C. Bursk, (Cambridge, Mass.: Harvard University Press, 1954), p. 10.

an industrial enterprise. Such a need seems obvious. However, it is generally accepted that in a democratic society legal enactments follow the desires of the members; habits, customs, living conditions and the social philosophy of individuals change and legal codes are adjusted accordingly. Democratic peoples cannot be for long subjected to law rendered obsolete by changed social conditions.

Hence it follows that in addition to a minimum compliance with existing law, successful continuing operation of an industrial enterprise necessitates consideration of the interests of all other institutions of the society, both internal and external to the enterprise itself. Stated more directly it may be said that a sound top management philosophy requires appropriate consideration of the interests not only of the legal owners, but of all other pertinent groups as well, notably the employees, customers, suppliers, competitors, the community, the general public and elements of government.

There is general acceptance by educators and industrialists who have given their views on this phase of the subject, of the need for a top management philosophy which gives careful consideration to the interests of all groups, both internal and external, in relation to the operation of the enterprise.

However, there seems to be some thought that unanimity of expression of the view is somewhat greater than that achieved in

practice. No doubt this is true, but it is not unusual for accomplishments to fall short of goals in any field of human endeavor. It appears certain, however, that appreciation of the need for a philosophy of this type has achieved wide acceptance by present top management. Typical views of individual executives on this point are quoted below as illustration.

The concept that a sound philosophy of management by the owners or operators of industrial enterprise should include appropriate consideration for other institutions of a society, in addition to the interests of the immediate owners, is by no means new. Writing in 1776 in his Wealth of Nations, Adam Smith made note of several phases of this need. His reference to consumers is a basic one, and warrants review here:

Consumption is the sole end and purpose of all production; and the interest of the producer ought to be attended to, only so far as it may be necessary for promoting that of the consumer. . . . But in the mercantile system, the interest of the consumer is almost constantly sacrificed to that of the producer; and it seems to consider production, and not consumption, as the ultimate end and object of all industry and commerce.<sup>33</sup>

Business owners, however, although proclaiming the essentiality of many of Smith's observations for the successful conduct of private enterprise, generally ignored his views with respect to a concern for labor, consumers, and community affairs external to their enterprises. There were of course exceptions to this general rule,

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<sup>33</sup>Smith, op. cit., p. 444.

Robert Osen being a notable one. Nevertheless throughout the Industrial Revolution and subsequently, through the first quarter of the present century, the primary concern of business and industry continued to be the well known adage of economic theory, the "maximization of profits" for the owners with only the minimum immediate consideration of other interests.

To be sure there were some voices "crying in the wilderness," particularly in the later years of the period cited. One of the most persistent was that of Frederick W. Taylor in his advocacy of "the great mental revolution" as a prerequisite for the successful establishment of "scientific management." Taylor's plea for managerial action in this respect apparently fell largely on deaf ears. Few managements heeded this call although many undertook to apply the techniques initiated by Taylor and his associates, without this necessary foundation.

The common managerial concept of that period is accurately described by Dean Collins of the School of Commerce, Accounts and Finance, New York University:

The accepted concept of the twenties, after all, was pretty much the concept of managerial "survival." The devil take the hindmost. . . .

To a considerable extent at least, over the years and since the twenties we have said goodbye to most of that. But there still remains a long way to go if business management is not to be tragically amiss in meeting its social responsibilities.<sup>34</sup>

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<sup>34</sup>G. Rowland Collins, "Preface," in The Social Responsibility of Management, (New York: New York University, 1951).

Taylor's concept, cited previously in Chapter II above, has even been amplified by the inclusion of stockholders, customers, and the community in the group requiring coordination. The importance of the relationship of these three groups and labor to effective management is frequently discussed in the current literature on this subject.

In addition to consideration of the comments of the authors quoted in this section, study of the writings of other respondents on this topic which are cited in the designated element of the classified bibliography may assist the reader in obtaining a representative view on this matter.

Perhaps the analogy between Taylor's thought and present day acceptance of related ideas can be appreciated more fully if we ponder that his principal concern really extended to all human relationships incident to the conduct of business; that he specifically cited the labor management problem simply because of its overwhelming relative importance. If so, his thinking in this respect is in agreement with current opinion. There can be no doubt that Taylor's advocacy on this point contributed very substantially to present insistence that industrial enterprises must be a social benefit, and not exist merely for private economic profit.

The inclusion in top management philosophy of the necessity for a broad social viewpoint must be taken as a prerequisite of an

effective industrial organization. Former Dean Donald K. David of the Harvard Business School observes in this connection:

An important characteristic of the business leader is the instinctive acceptance of responsibility - not only toward his business but toward his community - his nation - and even the world.<sup>35</sup>

Many writers discuss this matter in similar vein, but in greater detail. That the need for management appreciation of the importance of such a philosophy is not limited to small enterprises we note the coverage given by the General Motors Corporation in the General Motors Institute course on Industrial Management for its Managerial trainees:

Objectives of General Motors. Like every business, General Motors operates with a purpose - to provide a satisfactory return on the money invested in it by furnishing the best quality of needed products or services to the greatest number of people. Or as stated in the General Motors Motto, "More and Better Things for More People." To accomplish this objective, it is necessary to recognize the contribution of each of the essential component parts; the employees, the owners, the suppliers, the physical facilities, and the management.<sup>36</sup>

Another rather typical presentation by a smaller company, is that furnished by Mr. William B. Given, Jr., Chairman of the Board of the American Brake Shoe Company:

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<sup>35</sup>Donald K. David, as quoted by Richard H. Rich, "Management and the Community," Advanced Management, Vol. XVIII, No. 12, December, 1953, p. 7.

<sup>36</sup>General Motors Institute, op. cit., p. 2, Chapter 16.

**Company objectives:**

1. A better place to work in;
2. A better neighbor in the community;
3. A better company to invest in;
4. A better company to buy from.

These statements hang on the walls of our plants and offices as a constant reminder to all of us. We try to live up to them. Progress is being made.<sup>37</sup>

Many of the documents examined in this research did not cover the opinion of the author with respect to a basic philosophy of management. This condition was, of course, anticipated. However, the data collected indicate complete unanimity in the statement of the need for such a top management philosophy. It is obvious, certainly, that the mere statement of such a philosophy by top management and even its publication far and wide, does not necessarily assure its full and continuous application to the incidents of daily operation. And even less does it follow that the opinions and beliefs of educators, consultants, or other authorities on this point are closely indicative of actual operative conditions. Any person having even slight contact with current conditions well knows that the millennium in this respect not only has not arrived but undoubtedly is far off. However, if the experience of such an observer extends back to the first quarter of the century, there can be no doubt that appreciation of management for a broader point of view in this

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<sup>37</sup> William B. Given, Jr. "From the Point of View of Management," in Stuart Chase, The Social Responsibility of Management, (New York: New York University, 1951), pp. 70, 71.

regard has increased mightily.

But accurate measurement of the current status and the rate of progress of management thought and action in this field is highly desirable. Is it obtainable? Unfortunately not. Possibly the most thorough treatment of the problem is that furnished by Mr. Lawrence A. Appley, President of the American Management Association. Mr. Appley provided a management classification on the basis of attitudes that prevail within a company toward the managerial task, as follows:

1. Clear in Purpose and Sound of Action. That industrial management which understands the true nature and responsibilities of management . . . is guided in its action by the firm belief that products and services it offers are means whereby the company's employees may render a genuine service to society with deep personal satisfaction
2. Sincere in Desire and Earnest in Effort. . . .
3. Unaware and Unfortunate.
4. Anti-social and Out-moded: A single purpose of making money through exploitation of human beings.<sup>38</sup>

Mr. Appley then adds that category 1 currently includes some of our largest companies as well as numerous small ones, and that the number in the group is increasing slowly but certainly; the number in category 2 is increasing very rapidly; and that category 3 is decreasing. He declines an estimate of the number in category 4, but considers it

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<sup>38</sup>Lawrence A. Appley, A Current Appraisal of the Quality of Management, (New York: American Management Association, 1952), p. 6.

fair to state that "there are still far too many!"

But while the aspirations of management, as expressed in the literature by industrialists and educators alike, seem to constitute a symphony of hope for extensive application of a sound philosophy of management in the area of human relations, there arises an occasional discordant note. The only one unequivocally voiced by a respondent in this survey is quoted as an illustration: "The primary purpose of any enterprise, unless it is charitable or educational, is to make a profit, foreign ideologies notwithstanding."<sup>39</sup>

Even here, since the making of a profit is essential to the continued existence of private enterprise, this statement might be rationalized. However, it seems certain that the intent of the author was to eliminate the concept of service to the public.

It is believed that the above discussion just about exhausts the possibilities of lessons to be drawn from the empirical data available. It seems desirable, however, to refer here to pertinent observations of a noted British writer in this field, which constitute a necessary background for development of a sound philosophy of management:

Philosophy is the postulation of a vast query, which dwarfs into comparative nothingness the problems of day to day things.

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<sup>39</sup>George Gaynor Hyde, Fundamentals of Successful Manufacturing, (New York: McGraw-Hill Book Company, Inc., 1946), p. 4.

It demands of us whether we are conducting our practice according to any principles or laws, or merely snatching at the floating straws which pass. Whilst busying ourselves with the details of this expansion of management, it would be fatal were none to query its purpose and inwardness. <sup>40</sup>

In summarizing the contribution of respondents to this topic, it appears that the fundamental content deals with the whole broad subject of human relations. A declaration of intent suitably promulgated, is an initial required step, and must be followed by action which evidences sincerity of purpose and reasonable competence in implementation of the announced philosophy. Most managements subscribe to the philosophy, but records of accomplishment are of a lower order.

In contemplation of this condition, is there justification for such a program? There is indeed. For the recognition, noted above, of the common identity of the problems of employee relations, customer relations, community relations, etc., all as human relations, and by the adoption of the generally accepted procedure for action in this field, management is subscribing to proven practice. This practice, by whatever name it may be called, is nothing less than the Christian Ethic. It is the doctrine of the dignity and importance of the individual, the equality of man. It is a doctrine which teaches high standards of ethics and morality. And it has a record of successful progress for two thousand years. It is

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<sup>40</sup> Sheldon, op. cit., pp. ix-x.

true that many discrepancies have occurred between practical performance and established ideals, and still do occur. Nevertheless, there can be no doubt that the Christian doctrine has contributed mightily to the higher standards of present day civilization.

Perhaps it may be desirable at this point to review briefly the significance of the thesis developed above. Since the discussion ends with emphasis on the Christian Ethic, some readers might infer that social goals are being sought at the expense of, if not to a total exclusion of economic aims. Nothing could be further from the intent of the writing than such a supposition.

Current doctrines of "human relations" are not opposed to the concept of profit; on the contrary they are advocated because they contribute elements to the economic process without which the highest levels of productivity cannot be reached.

Some readers may recall that Adam Smith, the distinguished father of classical economic doctrine, is frequently quoted as authority for the concept that individual self-interest is the basis for all economic interaction. In consequence, they may reason that social conditions, betterments or otherwise, should have no part in the concerns of industrial management.

Any such reasoning is based upon a faulty premise. Adam Smith did, in fact, attribute to self-interest the motivation for economic actions

of all kinds. But he had in mind a very broad concept of the extent of self interest. It was by no means limited strictly to the immediate and specific terms of a particular transaction. He fully understood that need for cooperation of humans in a civilized society. In his words:

But man has almost constant occasion for the help of his brethren, and it is in vain for him to expect it from their benevolence only. He will be more likely to prevail if he can interest their self-love in his favor, and show them that it is for their own advantage to do for him what he requires of them.<sup>41</sup>

The degree of economic success attainable by enterprise management will be dependent in large measure upon the level of accomplishment achieved in pursuance of the purpose described in the last clause of the quoted passage. Indirect social betterments are frequently necessary to this end.

It is logical to assume that adoption of high ethical principles by industrial managements, if supported by sincere and intelligent endeavor to apply them, will bear fruit in both social and economic gains. In consequence, it seems evident that consideration of human relations, a simple facet of this topic, fully warrants the inclusion of the philosophy of top management as an essential attribute of sound organization.

### 3. Company objectives.

Organization is not an end in itself; it is a means to an end.

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<sup>41</sup>Smith, op. cit., p. 20.

The "end" is the objective of the organization. Thus, by definition, an objective is a sine qua non for an industrial enterprise.

Since an industrial undertaking is economic in character, it follows that the economic aims of the business must be set forth in the statement of its objectives.

In recognition of this fact the law requires a statement of purpose as a necessary element in the procedure for issuance of a corporate charter. In usual practice, however, the stated purpose to serve this legal requirement is very broad so that it may encompass future eventualities not clearly foreseen at the time of incorporation. More precise economic objectives are issued for actual conduct of operations.

Much less obvious, but nevertheless essential to a high level of effectiveness in operation, is the need for inclusion therein of some expression of the social betterments that are expected to accrue to all parties to be affected by the enterprise. Such action may be taken by direct citation, or solely by implication. As noted above, employees, customers, competitors, the community, the general public and elements of government, as well as the legal owners, are all interested parties.

Carefully designed and widely promulgated objectives may contribute to the alignment of individual values and interests for such persons with those of the enterprise much more thoroughly than solely economic incentives. If the effort is comprehended as mutual, enthusiastic rather

than routine performance may be expected. Our immediate concern, with respect to the attribute being discussed, is to evaluate the extent of the acceptance and application of these views in industry. In addition to the preparation and statement of such objectives, it is obvious that they must be promulgated in a manner that brings them to the attention of all parties whose interest and participation in the enterprise is sought.

The published literature on this phase of organization indicates very substantial agreement on these two points. In detail, as one would expect, there is considerable variation. One common practice is worthy of specific note. That is the established objectives include a statement of the top management philosophy in so far as it relates to concern for the interests of other groups as well as the owners. It may be noted that two of the examples of management philosophy cited above were in this form.

While the forms of presentation vary, the literature does evidence a comprehensive understanding by top management of its responsibilities in this regard. A British writer has summed up a general evaluation of this condition in this way:

All recorded experience suggests that this common end must have enough social content to appeal in some degree to the conscience of each of us. . . . To get the best out of men and women an aim must appeal to the best in them. . . . Once accepted and declared the aim must be constantly kept in front

of the staff, not blatantly or obtrusively, but quietly and persuasively.<sup>42</sup>

This phraseology expresses extremely well both the necessity for a value content of the objectives and for its effective communication.

This discussion related to company-wide objectives established by top management, sometimes referred to as primary objectives. It is necessary also to provide related objectives as essential steps in the attainment of the primary aims, and may be necessary in achieving collateral goals. Some writers supply detailed discussion of these needs. Professor Ralph C. Davis provides a good example of a full discussion.<sup>43</sup>

However, in respect to our present research, our interest is limited to establishing a requirement for incorporating the primary objective as an attribute of a proposed standard. The discussion here is therefore restricted to that phase.

It is believed that views cited above are truly representative of current management appreciation of the importance of this topic. However, a broader base for evaluating management consideration in this respect may be gained from the contributions of respondents which are listed in the pertinent section of the classified bibliography.

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<sup>42</sup> M. Cameron, Principles of Management, (London: George C. Harrap and Company, Ltd., 1948), p. 19.

<sup>43</sup> Ralph Currier Davis, The Fundamentals of Top Management, (New York: Harper and Brothers, 1951), p. 10.

Some further consideration of the logic which underlies careful preparation and thorough dissemination of company objectives may warrant more detailed treatment here. It has been indicated in the discussion in the preceding Sect. 1, that the legal form of organization of enterprise in the classification being studied should be the corporation. But a corporation is in law, and in fact, an impersonal business entity. This condition is a distinct disadvantage in management's task of securing enthusiastic contributions of personal effort on the part of employees throughout an enterprise. It is well established that the importance of personal contact and mutual confidence of members of an organization for effective, harmonious, united effort in attaining desired goals is not subject to question. Thus it is necessary that efforts be made to offset this disadvantage, by the inclusion under pertinent attributes of all practicable corrective measures. Successful action to this end requires the recognition and utilization of a number of basic human characteristics, the more important of which may appropriately be considered here.

Individual human beings everywhere and throughout the ages have demonstrated a gregarious nature. They like to associate with their fellows. The association may be formal or informal, but the urge to "belong" is powerful. As individuals they like to excell in some manner, intellectually or physically. They take great pride in their special ability and gladly demonstrate their prowess. Recognition

of their superior ability spurs them on to further achievement. As members of groups, societies, or institutions of any kind, they possess similar sentiments. They seek the acclamation of others for the achievements of their group, and as individual members they enjoy some reflected glory from the plaudits given. However, the energy and effort of each individual are by no means devoted equally to the interests of each institution of which he is a member. In fact, his contributions will depend on many variables. Chief among them, in a free country, will be the individual's value judgment of the worthiness of the objective of each group, the time available, as estimate of his ability to contribute to the effort, the economic and non-economic recognition he receives, and his convictions as to the significance of the achievements.

These human characteristics are of immense importance to American industrial management. Most Americans are "joiners." They belong to families, churches, lodges, fraternities, clubs, political parties, social groups, etc., almost ad infinitum, and last but not least, the great majority are associated with some business. Since the last named activity is usually an economic necessity for existence, it occupies, as a rule, by far the greatest portion of man's waking life. It is natural then, that he should seek to justify, in his own mind as well as for the impression of others, that his services are of value to the community and indeed to the nation, as well as more immediately to himself.

and family.

Success in such an endeavor will be greatly facilitated if all who have contact with the company which employs them, hold the opinion that the enterprise is a worth-while asset to the society. The contact might be direct. Or it might be indirect through knowledge of its products or services, or incidental due to some contribution to the community or nation. Favorable opinions of this kind must finally rest on the established reputation for quality products or services of proven worth. But achievement of a position of high esteem can be expedited and retained more surely if aided by effective promotional activity.

There can be no doubt that industrial management is demonstrating an increasing awareness of the great importance of aligning the interest of all individuals and groups concerned in its activities with the established objectives of the enterprise. Efforts to this end and divers means for their application are being continually expanded. This attribute offers opportunities to counter unfavorable attitudes that are certain to result if management action is ineffective. High level action is therefore essential. The problem of personnel attitudes pertains to the science of psychology, but is commonly referred to as "morale."

Attainment of high "morale" has long been the objective of military research and operative procedures because of its immense importance in that field of action. More recently its significance in

efficient business operation has been recognized, and much effort has been expended to improve operating performance by specialized psychological research, and by the adoption of appropriate techniques. A pertinent study, with direct bearing on our immediate topic, included the comments of 167 business men in various levels of management. These comments were submitted in response to a questionnaire consisting of 97 questions chosen as acute psychological business problems. The three most acute items as determined by responses, were indicated as follows:

Psychological Problems of Business Men	Per Cent having the Problem
1. Remembering names and faces of people . . . . .	75.0
2. How to make employees enthusiastic and energetic . . . . .	72.6
3. How to obtain the maximum of work from employees . . . . .	68.4 <sup>44</sup>

This high priority of management concern for the listed items is of interest, but occasions no surprise to students of the subject.

The views cited above are considered to be representative of the literature on this topic. However, a broader base for evaluating

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<sup>44</sup>Harry Walker Hepner, Psychology in Modern Business, (New York: Prentice-Hall, Inc., 1930), p. 10.

management responsibility in this respect may be gained from the works cited in the classified bibliography.

Summarizing, it seems clear that, in addition to clarifying the vital economic purposes of the enterprise, the statement and dissemination of objectives must take full advantage of the opportunities thus afforded to achieve and maintain high "morale."

#### 4. Resources available, men, money and materiel.

The possession of a comprehensive knowledge of the available and obtainable resources for operation of an enterprise is a basic need for top management. In this phase of our study we are concerned only with pertinent data in quality, quantity, and extent as is required for top management consideration in planning, precedent to the formulations of major policies. Study of the literature reveals many variations in the methods of presenting this need. The different writers evidence great divergence in their opinions of the relative importance of the individual factors, as indicated by the degrees of emphasis in their treatments. Many provide separate discussion of the principal factors cited, with but little indication or implication concerning their inter-relationships.

A type of treatment covering the economic flow in a manufacturing enterprise is given by Rautenstrauch and Villers:<sup>45</sup>

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<sup>45</sup> Walter Rautenstrauch and Raymond Villers, The Economics of Industrial Management, (New York: Funk and Wagnalls Company, 1949).

One of the most complete expositions noted is that utilized by Mr. James O. McKinsey, educator and management consultant, as an element in his procedure for analyzing business enterprises from a top management point of view. His concept is shown below:

IV. Resources:

A. Executive Personnel.

1. Determination of present and long run needs.
2. Appraisal and selection.
3. Executive development.
4. Executive compensation.

B. Facilities.

1. Location of facilities.
2. Capacity of facilities.
3. Construction of buildings.
4. Type of design of equipment.
5. Layout.

C. Financial resources.<sup>46</sup>

Another type of presentation, illustrative of the importance attached by management to the problem of integrating resources, is provided by a noted British writer, David Graham Hutton:

The kind of industrial management which is now developing . . . puts more and more of a premium on the marshalling and proper combining, the varying and appropriate adapting the planning and due changing of all ingredients of production: of models, processes, tools, human skills, raw materials, and fuel and power.<sup>47</sup>

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<sup>46</sup>Columbia University, Executive Program in Business Administration, (New York: Columbia University Press, 1953).

<sup>47</sup>David Graham Hutton, We Too Can Prosper: the Promise of Productivity, (George Allen and Unwin, Ltd., 1953), p. 36.

Still another practice might be called the M's classification, the number of M's varying but in this case five:

1. Methods.
2. Men.
3. Money.
4. Machines.
5. Materials. <sup>48</sup>

And a final illustration is a brief but explicit statement of the need:

It is a part of (top management) policy to lay down the broad limits in money, manpower, and resources generally, within which the programme must be carried through. <sup>49</sup>

The fundamental nature of the economic function of top management as the "entrepreneur" combining quantities of the factors of production, was covered in some detail in the section above. There is no need to repeat the discussion as it is obvious that the empirical data collected in the survey do not affect the validity of the basic economic theory. However, the comments of respondents pertinent to the actual problems of integrating the resources of an industrial enterprise do bring forcefully to mind the immensity of the task. This finding, naturally, comes as no surprise to students of management. One respondent

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<sup>48</sup> James Irwin Tucker, Intelligence at Work, 2nd ed. (Los Angeles: Leader, 1943), p. 86.

<sup>49</sup> Frederick Collins Hooper, Management Survey, (London: Sir Isaac Pitman and Sons, Ltd., 1948), p. 1.

does present the matter in a particularly effective way. After noting that an assemblage of fine buildings, excellent equipment, skilled workmen, and ample supplies of raw materials and money can create nothing without the existence of a certain force, he adds: "We label this force 'Management' and define it as the total function of conceiving, planning, implementing, directing and controlling an enterprise."<sup>50</sup>

Another respondent uses a different analogy to illustrate the role of management. Referring particularly to the production process, i. e. "conversion by manufacture," he states:

The service of management may be looked upon as a catalyst which causes the values inherent in machinery, raw materials, labor and other services to flux into a combination of values embodied in a product or products.<sup>51</sup>

This is a faulty concept. It tends to create an impression of "management" standing idly in the midst of productive activity. The mere presence of "management" is not enough to secure efficient production. It must be an active ingredient, to use chemical terms, if a reaction is to take place. Furthermore it must be of suitable quality, proper quantity and applied with correct timing if the product is to meet high standards. The "services of management" as well as "labor and other services" mentioned in the quoted passage, in

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<sup>50</sup> General Motors Institute, Industrial Management, op. cit. Chapter 2, p. 1.

<sup>51</sup> Rautenstrauch, op. cit., p. 13.

to constitute the "transferences of skill" into the product.

There is no different economic significance for a given value of management service than for an equal value of service of other employees. This is readily apparent, if we set aside the convention that management pertains to the group of employees who supervise other employees, and consider management solely as a function. We will further take the position of many writers that this function pertains to the management of things as well as of people. Under this concept all employees are "managers" in some degree. The lathe hand manages his lathe and its appurtenances; the drill-press operative manages his press and tools; and the floor sweeper manages his broom and brush. Each has an area of discretion and decision under policies and prescribed procedures, limited though it may be. The expense for services of the company president and floor sweeper as well, must be converted into product value.

At this point it seems desirable to note what may be termed as inconsistency in the literature. In Chapter I, in connection with the discussion of a definition of management, notation was made of the predominance given by most writers to the matter of personnel, in some cases with a total exclusion of materiel. The literature relating to management's concern with respect to resources, however, shows no such division of opinion. Without exception discussion of this latter

subject includes varied aspects of materiel as well as those of personnel.

The realization by top management of the urgent need for a system to furnish information of this type is of comparatively recent origin. The need may be described as a requirement for accounting data covering all assets of the business and prepared for immediate use as well as for planning future operations. This is, of course, in contradistinction to the long established practices of financial, cost, inventory accounts, etc. which were primarily of historical value. The duties incident to this purpose are usually prescribed as a function of the "Controller." There are listed in the classified bibliography a number of documents which cover this matter in considerable detail.

Before leaving this topic we should ponder the fundamental nature of its relationship to the success of an enterprise, and hence the extreme importance of the possession by top management of accurate, complete, and current information upon which to base plans and action. We may be aided in this endeavor if we review Livingston's thoughts in the introduction to his development of a theory of organization and management of an enterprise. He states:

The problem is essentially, one of coordinating the use of men, materials, and machines (or processes) in the search of a common goal. To attain this, an association is formed which exists in an environment and must adjust itself thereto. With this as a premise, certain postulates are made, and the various required actions are compared with them. The cycle of management consists of five distinct and recognizable steps: decision, planning, preparation, action, and review. Each of these steps can be broken down again

into the same five steps. Further, it is stated that there are two coordinates - authority and sequence - and these five major steps together with their subdivisions (and in some cases subdivisions) may be located on these coordinates. When this is done, the pattern - the structure of management - appears.<sup>52</sup>

In summation it may be said that the function of top management with respect to resources is the maximum utilization of the resources of the enterprise in the attainment of the established objectives. This, of course, is the function of the entrepreneur of economic theory. In an actual case, however, this is no simple task. It involves the efficient performance of all phases of management duties as previously enumerated. It is a truism that an industrial enterprise can have no existence without resources. It is equally true that the mere possession of resources is not indicative of successful economic functioning. For this goal the top management of the enterprise must at all times have a comprehensive knowledge of the nature and extent of actual and potential resources, and the competence to utilize them advantageously. A system which provides top management with full, accurate and prompt data on resources is a necessary attribute of effective organization. Mere financial accounting only is insufficient for this purpose. Records, both quantitative and qualitative, of prime physical items which may require considerable

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<sup>52</sup>R. Teviot Livingston, Engineering of Organization and Management, (New York: McGraw-Hill Book Company, Inc., 1949), p. xii.

time or be otherwise difficult in procurement must also be readily available.

##### 5. General policies of top management.

The survey seems to indicate that almost every writer or speaker on any topic relating to industrial management and organization introduces management policies into the discussion at some point or other. The significance attached to the term by the different individuals, however, varies between wide limits. Considerations of some of these usages, selected as more or less typical of different views, may be helpful as a basis for evaluating the importance of this item: "Administration is the determination and execution of policies involving action."<sup>53</sup>

Roscoe gives this definition: "A policy is a code or guide for action that stipulates in a general way the preferred method of handling a situation or responsibility."<sup>54</sup>

Davis views a policy as a standard: "A policy is basically a standard, either expressed or implied, of those principles and rules that are set up by executive leadership as guides and constraints for

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<sup>53</sup> Wallace Brett Donham, Administration and Blind Spots, (Boston: Graduate School of Business Administration, Harvard University, 1952), p. 16.

<sup>54</sup> Edwin Scott Roscoe, Organization for Production, (Homewood, Illinois: Richard D. Irwin, Inc., 1955), p. 377.

the organization's thought and action. <sup>55</sup>

Hooper writes: "It is the task of policy to lay down strategy; to assign objectives; establish priorities, and set the time scale." <sup>56</sup>

In the view of another writer the main duties of the Board of Directors are to determine the philosophy of the business -- and then to

(2) interpret that philosophy in relation to the more detailed conduct of the business in the form of policies, and

(3) insure that the business is conducted by the management in accordance with the policies that have been established. . . . <sup>57</sup>

It is believed that the above illustrations cover the most widely held concepts as to the nature, importance and use of policies. However, acceptance of this view is far from unanimous, and consideration of "procedures" is necessary to a full appreciation of the situation. The survey reveals very definitely that in industrial practice the difference in the significance of "policies" and "procedures" is extremely tenuous. This is particularly true in the smaller companies. The existence of this condition is quite well known as indicated by comments of different authors, for example:

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<sup>55</sup> Davis, op. cit., p. 13.

<sup>56</sup> Hooper, op. cit., p. 1.

<sup>57</sup> John Seymour, Company Direction, (London: MacDonald and Evans, Ltd., 1954), p. 29.

"There is no well defined border between ordinary procedures and policies."<sup>58</sup>

Such incidental observations, however, although indicative of a common practice, are nevertheless inadequate as a quantitative measure of the practice. Much more adequate for this purpose is a survey of the actual practices in vogue, conducted under the auspices of the American Management Association. The research report was based on plant visits and personal interviews, analyses of more than a hundred policy manuals, and upon correspondence with some 200 companies. The research team noted in its report that most of the companies canvassed were convinced that they should have policies which should be written, and preferably published in manual form. However, the survey report also disclosed that the fusion of policy with procedures was the usual practice and the report noted: "Policy as applied to manuals is an elastic term."<sup>59</sup>

If we pause at this point to assay the significance and utilization of policies in industrial enterprises it seems clear enough that most respondents in this study feel the need of written policies. Just what

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<sup>58</sup> Roscoe, op. cit., p. 379.

<sup>59</sup> American Management Association, How to Prepare and Maintain a Supervisors' Policy Manual, (New York: American Management Association, 1947), pp. 12-13.

a policy is, however, is far from evident. The term "elastic" used in the survey report cited is subject to various interpretations. It might mean flexible, a characteristic generally considered by industrialists and students of management as an extremely desirable feature of management's general policies. Reading of the report, however, gives a contrary impression. The intent appears to be that the significance of policy may be stretched, almost without limits, with the result that so called policy manuals include an extensive miscellany of materiel. Particularly in the smaller companies, it tends to constitute a "catch-all" for management communications of many kinds. There seems to be no doubt that in many companies policies and procedures are intermingled in a "Policy Manual." More frequently, however, it appears that the "Policy Manual" is in fact exclusively a "rule book." That is, it contains only rules prescribing definite courses of action to be taken under specified conditions. Entries include such items as: employees will wear goggles when operating emery wheels; the minimum age limit for employment is 18 years; smoking is not permitted at any place in the plant, except in the cafeteria; etc. A guide to the preparation of such a manual, including excerpts from the practices of many companies has been issued by the National Foremen's Institute. It may be noted that under the heading "Company Policies" the author

states: "Company policies are rules of the company."<sup>60</sup>

A reference book of the above type is certainly a necessity for foremen and all other supervisors. Indeed much of its content, possibly as excerpts, should be posted at appropriate places in the plant so that all employees would have the opportunity of thoroughly understanding them. It seems, however, that the document comprising them might more properly be designated as "Company Regulations," "Company Rules," "Plant Operating and Safety Manual," or a similar title which does not include the word "policy."

Returning to consideration of "policies," it appears that in large government agencies and in many of the large corporations the term is employed in a much more selective manner. Here the top levels of administration are known as "policy levels," lower eschelons as "working levels." A "policy" emanating from the policy level constitutes only a general framework for guidance of subordinates. It must be shaped by the appropriate lower level for action in a particular situation.

However, this concept is by no means universal in the large corporations as is evident from the report of a research study cited

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<sup>60</sup>R. C. Oberdahn, How to Prepare a Foreman's Policy Manual, (New London, Conn.: National Foremen's Institute, Inc., 1952).

above in Chapter I:

There is a good deal of loose talk about policies. The word is variously used to mean departmental procedure, usual custom, basic course of action, or management decision.<sup>61</sup>

Another distinction in types of policy sometimes made is that of general and special. Policies affecting the whole enterprise are general policies; special policies are those pertinent to particular functions such as Personnel Policies, Industrial Relations Policies, Financial Policies, etc. The latter are usually prepared in the staff section of primary concern, but are issued only as approved by the Board of Directors. Quite common examples of general policies specify that "The Company will manufacture only products of the highest quality," and "The Company wage and salary scales and working conditions must always compare favorably with those of competitors and best practice."

It might appear that treatment of wage and salary scales should appear in Personnel Policies rather than in General Policies. However, since it is usual to give wide publicity only to the General Policies and a statement of the kind is of general interest to the community, its inclusion as a general policy is common practice.

"Good practice" with respect to policies may be summarized briefly:

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<sup>61</sup>Holden, op. cit., p. 79.

**Purpose of Policies:** Policies are usually issued in broad terms, to constitute a guide to subordinate officials in the performance of their duties, under authority otherwise delegated to them, for the purpose of securing coordinated action of all echelons in the attainment of the objective of the enterprise.

**Essential Features of Policies:** Effective functioning of an organization requires that "policies" meet the following specifications:

- a. They should be clearly and concisely expressed in writing.
- b. They should be limited to matters of major concern to avoid loss of emphasis in a maze of documentary detail.
- c. The officials to whom distribution is desired should be specifically stated.
- d. They should be issued in a formalized series of documents in order to permit more ready and complete comprehension by all pertinent officials, to facilitate checks for compliance, and to simplify modification or revision.

Responsibility for maintenance of the "Policy Manual" should be assigned to a high level staff element. This responsibility will

necessitate frequent checks for compliance throughout the organization, and submission of recommendations for additions, rescissions, and modifications as may be warranted by analysis of the situation.

In order to provide readers with a broader base for evaluation of "good practice" with respect to policies as summarized above, there has been included in the classified bibliography a reading list on this topic. Reference to these writings will readily disclose that variations of views of the different writers are so numerous and the shadings of their interpretations are frequently so slight as to render impracticable a more definitive statement of the actual practice in industry.

In recapitulation it may be said that the issuance of policies and procedures provides top management with the opportunity and means of interpreting its philosophy and the expressed objectives of the business in terms much more substantive than is possible in the few words appropriate to their general statement. Co-ordination of effort by all hands is, of course, an important goal in this endeavor. A specific aim of great value to the overall operating efficiency of the enterprise, is the increased individual effort which will result if publications of this type effectively align the interests of individuals and groups with the objectives of the enterprise. Written policies and procedures designed to accomplish these purposes constitute an essential attribute of good organization.

6. Planning.

In Small Plant Management the American Society of Mechanical Engineers states: "The very basis for any successful manufacturing concern is planning."<sup>62</sup> In so doing the Society recorded concurrence with M. Fayol, for it may be noted his term "Prevoyance," usually translated as "planning," is the first one in his listing. But we should also note that M. Fayol has provided some amplification of the significance which he attached to this term. He wrote: "Prevoir, c'est à dire scruter l'avenir et dresser le programme d'action,"<sup>63</sup> i.e. literally "to foresee, that is to say, to examine the future and to prepare the plan of action." But in order to foresee, forecast, or predict future events, a knowledge of past events is necessary. Acquisition of such knowledge implies investigation or research. Since it is desired to convey this complete concept, the term "planning" as used in this paper includes research, prediction, and preparation of plans of action. It is believed that this usage is in agreement with Fayol's thought.

This survey indicates that the activity of "planning" is accepted by all respondents as an essential function of a sound organization.

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<sup>62</sup> American Society of Mechanical Engineers, op. cit., p. 7.

<sup>63</sup> Henri Fayol, Administration Industrielle et Générale, (Paris: Dunod, 1941), p. 5.

This statement does not mean, of course, that the definition given here is universally accepted. Many authors cite research or prediction as separate items. Other writers do not specifically name these elements. In many cases their inclusion seems to be implied; in other instances there is no evident indication. In any event it is clear that planning in some form is considered an essential element in any organization; and, in addition, it is indicated that many of the contributors to the subject consider that research and forecasting are necessary adjuncts to that process.

With respect to other content, however, there is much less unanimity. Many writers, apparently oblivious of Adam Smith's observation that "all production is for consumption,"<sup>64</sup> deal largely and often exclusively with production planning. Typical comments on the various treatments of this topic may be noted by reference to the works listed in the pertinent section of the classified bibliography.

The problem, from the broad company view, must be based on estimated sales. The treatment of this phase generally recognizes a distinction between short range and long range planning. The common practice for the short view is a 12-month period, using a moving average of sales, seasonally corrected, as a base. Long range plans are

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<sup>64</sup>Smith, op. cit., p. 444.

frequently for 3 or 5 years, but some larger companies also provide estimates for 10 or even 20 years. In a great many small companies all planning seems to be on a day to day, or hand to mouth basis.

Concern as to sales possibilities is based both upon acceptability of product design, i.e. customer demand for particular items, and also upon general economic conditions. It is well recognized that the greater the period of the estimate the more important is accuracy in the economic forecast. The staff services available in the large corporation for estimating economic trends are considerable, but in small companies reliance for this service usually falls upon the chief executive possibly with some part time assistance.

The type of planning here discussed is frequently referred to as "master planning." However, as soon as decision has been made concerning specific products to be made, the rates of production for given periods, and the anticipated income from their sale has been determined, further detailed planning is necessary.

The master planning, of course, is specifically a responsibility of top management. Naturally recommendations of divisions constitute important elements of consideration. The sales department should have a good knowledge of customer demand, i.e. the items and quantities that can be sold for a given price. The production department should be able to estimate production costs of proposed items, making

allowances for estimated changes in costs of purchased material and labor. All other elements of the company participate similarly with regard to their respective responsibilities.

It is evident then that planning by top management must include consideration of the suitability of the organization structure, the qualifications of personnel, and their interrelationships. These matters will be covered in later sections.

However, one other point should be noted here. It will be recalled that one of Taylor's most important contributions to the improvement of production efficiency was his insistence upon the separation of "planning" from "doing." As Taylor's major interest was in the shop, this change resulted in removal of responsibility for planning from the shop to the office. There a new unit was established to provide the service much more completely and uniformly than previously had been the practice. Improved working conditions, better physical equipment and more highly qualified personnel specifically assigned to the task, greatly improved the overall performance. Recognition of the advantages of this arrangement became general throughout American industry and the production planning section has long been a standard feature in manufacturing enterprises. No doubt all of the changes mentioned contribute to improvement of overall productivity, but one element of immense importance is the specific assignment to the particular task and

concurrent relief from unrelated duties.

This same characteristic must be taken account of within the planning responsibility of top management. Particularly with respect to long range planning, it is necessary that personnel so assigned be essentially free of day to day operative duties. Otherwise, the long range planning will be neglected in favor of the more immediate tasks. The latter produce results sooner, and accomplishments are much more readily measurable.

Long range military planning has been considered necessary for a very long time. However, its especial urgency with respect to production of military equipment was not realized generally in this country until World War I. The complete failure of industry to meet the production requirements of many major items for that mobilization, necessitated the equipment of our forces with materiel furnished by our allies, Great Britain and France particularly.

As a result of that experience, a great deal of attention was given the matter in the post war period. As a consequence, in the early 1920's, an extensive industrial war planning establishment was organized. In all the major headquarters, personnel were assigned to the program on a full time basis. In the Defense Departments the lesson had been learned "the hard way." Long range planning is definitely not a task to be treated lightly or casually.

With respect to American private industry at the present time, it appears that many of the large corporations are fully conversant with the urgency of this problem. Many do have full time staffs engaged exclusively on long range planning of various kinds. Such programs include product research, market research, technological research both applied and basic, economic studies, etc. But it seems that this condition is by no means general. Most long range planning seems to be a task assigned to operating personnel, "in addition to their other duties."

From some comments in the literature it appears, however, that many in industry are unaware of the impracticability of effective long range planning by personnel charged likewise with high pressure current duties. For example, Dr. Hertert A. Simon, speaking before a "Round Table" composed of a distinguished group of industrialists, and concerning problems uncovered in a current research in which he was engaged, stated:

How do you get long range planning and analysis accomplished in the midst of the day-to-day pressures of management and supervision? The answer we reached - at least for this kind of accounting situation - is that you have to have a considerable measure of separation between heavy supervisory responsibility and responsibility for long range thinking.<sup>65</sup>

Dr. Simon does not furnish us with data as to the number of companies covered by his research project and hence we lack a ready

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<sup>65</sup> Carnegie Institute of Technology, op. cit., p. 34.

means of visualizing the extent of the condition noted. However, since he does state that the research party has been carrying forward the research during the past two years, and as it is continuing, it seems a logical assumption that the comment is based on a considerable number of case studies.<sup>66</sup>

In as much as the concept involved is that of Taylor in separating "planning" from "doing," it may seem strange that industrialists or researchers should now consider that the procedure involves a new thought. Of course it is true that Taylor was primarily concerned with the manufacturing operations of comparatively small machine shops. Consequently his most earnest efforts in this endeavor were directed toward removing responsibility for planning production operations from the shop to a specifically provided office element. Nevertheless this is the same concept which, as applied to top management action, has become the most important phase of the more inclusive procedure now commonly referred to as "decentralization." "Decentralization" embraces the delegation of all types of responsibilities by top management to subordinate elements. However, since the terms "thinking" and "big thinking" by top management have become synonyms for attention to the complex problem of long range planning, the major effect in "decentralization" is to relieve top

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<sup>66</sup> Ibid., p. 25.

management of all operative duties in so far as is practicable. Thus greater freedom is provided top management for the performance of essential planning which can not be done adequately at a lower level.

Of course, this problem is more acute in larger corporations and many have been well aware of its importance for many years. Others have not. As an outstanding example of the former classification we may cite the General Motors Corporation. This company recognized the essentiality of the segregation of planning from operative duties in the early 1920's, and has consistently improved its organization in this respect since that date. The organization of its "General Staff," based upon the prior military usage, was established to perform long range planning functions. They have no direct authority over operating units.<sup>67</sup>

In contrast to this early appreciation of the need for relief of top management from excessive operative functions we may cite another giant of American industry. The General Electric Company, under a new president, as late as 1952 was reorganized to decentralize operations.<sup>68</sup>

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<sup>67</sup> Harlow H. Curtice, The Development and Growth of General Motors, Statement before the subcommittee on Antitrust and Monopoly of the U. S. Senate Committee on the Judiciary, (Washington: General Motors Corporation, 2 December 1955), pp. 6-13.

<sup>68</sup> G. E. Gets the Small Business Touch," Business Week, 19 April, 1952, p. 118.

Evidence that adoption of this practice is a continuing rather than a completed process may be detected in current writings. For example: "Delegating full responsibility in all phases of each product group frees Carrier's top men for big thinking."<sup>69</sup>

Data of this nature support Dr. Simon's comment.

Small companies obviously cannot fully comply with desirable practice in this respect. It does seem, however, that the chief executive and other members of top management should endeavor to keep themselves as free as is practicable from day to day pressures, if they are to perform acceptably the essential long range planning function.

Summarizing, it is clear that the literature fully accepts "planning" as a fundamental of an industrial undertaking. Furthermore, long-range and company wide planning are recognized as specific functions of top management. It is also evident that there is increasing appreciation of the incompatible nature of long range planning and operating duties; and that the inherent conflict involved inhibits the assignment of responsibilities of both of these types to the same individuals, in so far as is practicable in view of other circumstances. With respect to top management complete separation is not feasible. However, major emphasis can be given to the long range planning function by a maximum

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<sup>69</sup> "Reorganizing For an Exploding Market," Business Week, 31 October, 1953, p. 171.

delegation of operating duties to subordinate echelons. This attribute must be considered a primary aspect of organization.

We will now turn to consideration of organization structure.

#### 7. Organization structure.

Organization structure, as the term implies, relates to the arrangement or form of the constituent parts of the organization. The various typical forms will be discussed below, but before undertaking this task some notation of the import of the concept is warranted.

The significance of organization structure may perhaps be best comprehended as a tool utilized to exploit fully the principle of the "division of labor." The importance of the effective application of this principle in the economic success of an industrial undertaking is widely appreciated and can hardly be overstated. Elaboration on this point seems unnecessary. However, it may not be amiss to recall that Adam Smith, laying the foundation for what has since become classical economic doctrine, devoted the first three chapters of his "Wealth of Nations" to an exposition of the nature of this concept.<sup>70</sup> He was well aware of its fundamental relationship to economic efficiency.

A British industrialist referring to the essentiality of an effective organization structure observed: "The subject is perhaps the most

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<sup>70</sup>Smith, op. cit.

important in management since unless the machine is right one cannot expect the best output from it."<sup>71</sup> An overwhelming proportion of respondents to this attribute agree as to the importance of this element. As must be expected their views are expressed in extremely varied language, but their sentiment is unmistakable. The great bulk of these writers place great value on formal organization, and for the most part, on the usual accompanying practices. There are, however, a few writers, a very small few writers, a very small percentage of the total number of respondents, who place a much smaller value on formal structure and its usual appurtenances of organization charts, organization manuals, diagrams or tables of functional responsibilities, job descriptions, etc. And there are extremists at opposite poles in their opinions on this subject. In this latter classification, this survey disclosed only one example at each extreme.

It may be desirable to provide illustrations of these extremes, as a reminder that human emotions rather than facts or logic may color the pronouncements of industrialists as well as of statesmen; and that contemplation of such views may enable a researcher to avoid some subjective errors.

For this purpose the comments of Mr. James F. Lincoln,

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<sup>71</sup>Hooper, op. cit., p. 45.

President of the Lincoln Electric Company of Cleveland, Ohio, are quoted herewith:

**An Organization is Composed of Individuals --  
Not Charts**

There is a general tendency for those dealing with organization to produce a chart that shows who has authority in all functions and under all conditions. This tendency is often so complete that it leads to the detailing of all duties to the last act and order. Such an organization will never be either efficient or progressive. In fact, such channeling will stifle progress probably as completely as the shop politics that it engenders. An industrial organization must operate as individuals to succeed. . . . These organization charts are a throw-back from the military who carry the organization chart to its logical conclusion. Authority there is supreme, hence progress is practically non-existent. <sup>72</sup>

This is an extreme view, far from the position of most students of the subject. Nevertheless, as the chief executive officer of a financially successful enterprise, Mr. Lincoln's observations are entitled to consideration. And certainly the Lincoln Electric Company has achieved an outstanding record. It appears, however, that Mr. Lincoln's experience has been limited to this single company with which he is presently associated and with which he has been continuously associated since 1907. <sup>73</sup>

The basis for Mr. Lincoln's reference to military organization

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<sup>72</sup> James F. Lincoln, Incentive Management, (Cleveland, Ohio, The Lincoln Electric Company, 1951), p. 63.

<sup>73</sup> Who's Who in America, 1954-1955, (Chicago: Marquis - Who's Who, Inc., 1955), p. 1607.

is not evident. As a matter of fact most of the recent advances in organization planning by industry have followed from the close contacts with the military during World War II. It seems pertinent to furnish support for this assertion from comments of a highly qualified expert in this field, Dr. Harlow S. Person.

Dr. Person, while Dean of the Amos Tuck School of Business Administration at Dartmouth College, organized the Tuck School Conference on Scientific Management, held at Dartmouth in October, 1911. At that conference, for the first time the industrial public met in one group the engineers who were the pioneers in the development of "scientific management." Taylor, Barth, Gantt, Emerson, Cooke, the Gilbreths and others less well known were all there, and the conference became a significant milestone in the progress of modern management. The eminence in the profession to which Dr. Person has since risen is well known to all students of management. No one can doubt his qualifications to speak with authority on this subject. His comments with respect to military organization have validity and are quoted herewith:

The operations sector of the modern military establishment is the most impressive present-day example of the technique. . . . Many among us still talk about the obsolete "military organization" as a contrast to the advanced functional organization; but in fact the operations sector of the modern military establishment is an outstanding example of Scientific Management and functional organization.

But the representative business man and his plant executives are victims of habit - the habit of trusting to the familiar and to

hunches and snap decisions. What was good enough for their forebears is good enough for them. They believe they will maneuver through or muddle through in some way.<sup>74</sup>

In violent contrast to the opinions of Mr. Lincoln expressed above, we have comments of a different order:

Organization and team work. . . . (Organization) . . . It is the one great contribution of man to life; and he has much still to do to achieve real success at it. . . . Many people claim to be unable to work with an organization . . . "it cramps their style," they would have us believe. Rot and nonsense! . . .<sup>75</sup>

Most writers on organization structure describe three separate types, i. e. "line," "functional," and "line and staff." Many add "committee" as a fourth type, but others consider committees merely as alternatives to individual assignments, and not a separate type.

Most writers defining the "functional type" of organization structure relate the concept to that of Taylor's "functional foremen." This concept, however, in so far as it contemplates that an individual is directly subject to the orders of a number of superiors, is unworkable in practice. It conflicts with human experience of probably many thousand years as embodied in the ancient precept: "No man can serve two masters." In the case studies where a formal arrangement of this nature

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<sup>74</sup>Harlow S. Person, "The Genius of Frederick W. Taylor," Processes of Organization and Management, (Washington; D. C.: Public Affairs Press, 1948), p. 139.

<sup>75</sup>J. C. Frederick, The Great Game of Business, (New York: D. Appleton and Company, 1920), pp. 68-69.

has been reported to be successful, it is probable that the actual practice followed some informal relationship. In so far as "functional staff" merely provide advice or service in specialized lines, "functional" and "staff" organization are identical.

It should be noted that some writers use the term "functional type" merely to indicate a structural grouping by "function," i.e. foundry, forge, lathe-work, milling work, etc. Such a grouping, of course, does not conflict in any way with the "line and staff" concept.

This survey indicates that the organizational structure in almost universal use is that usually referred to as "line and staff." This includes a direct line of authority from the chief executive downward through the organization, with "staff" advice and services provided at the various levels of the hierarchy as is appropriate to the nature and size of the business.

The great majority of "respondents" consider organization charts as essential tools of management. The type most emphasized is one showing lines of authority, but the need for functional charts and personnel assignment charts is also generally recognized. With but few exceptions the form of charts specified is the so called "inverted tree." A very few writers attribute great merit to the "polar" type.

A word of explanation on these terms may be appropriate. The most common form of chart may be described in outline as an

arrangement of rectangles of varying sizes, each one representing a particular element of the organization. The relative importance of the various activities are indicated by their position on the chart and, as a general rule, by the size of the rectangle. "Command" relationships are indicated by solid lines from the chief executive authority, through intermediate levels to the lowest levels shown. In common practice the chart consists of a single large rectangle at the top center of the diagram representing the chief executive authority. There are one or more levels of rectangles representing staff functions, each lower level in a descending scale of size. And, in addition, a solid vertical line proceeds from the chief executive box to a bottom line of one or more rectangles representing the production elements, i. e. operating divisions or separate plants. If such a chart be inverted and examined it may be noted that the diagram resembles a conventional form of a tree. The root mass may be compared to the chief executive rectangle; the trunk to the solid stem from the chief executive to the operating element; the tree branches and leaf clusters to the horizontal arrangement of the staff and pertinent subordinate elements; and the top foliage to the operating divisions or plants. In addition to the similarity of the form, a related symbolism may be noted. In a dynamic industrial organization the source of inspiration and strength for effective operation and growth is an energetic and competent chief executive. In a tree the health and growth is

very largely dependent on the virility of the root system.

A polar chart consists of a series of concentric circles. The inner circle represents the chief executive authority. The surrounding concentric rings represent various levels of authority, in an inverse ratio to their distance from the center. Each concentric ring is separated into segments of equal status by elements of radii. This type of chart is advocated by some authorities as a means of minimizing conflicts among officials in regard to relative "status." This idea is somewhat comparable to that involved in the tradition of King Arthur's Knights of the Round Table. Braun furnishes a representative presentation of this view.<sup>76</sup>

The necessity for amplification of the information conveyed in organization charts by issuance of organization manuals, job descriptions, or similar documents was specified by most writers. The conflict in attainment of the desirable features of a "flat" organization structure without permitting excessive "spans of control" was covered by most respondents. There is general appreciation that there is no simple or definitive rule for determining a "span of control" for specific applications.

There is very general appreciation and acceptance of the need for decentralization of management. This condition is achieved, of

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<sup>76</sup>Carl F. Braun, Management and Leadership, (Alhambra, California: C. F. Braun and Company, 1954), p. 65.

course, by delegation of authority and responsibility to subordinate elements or individuals. It is well understood that these delegations should be definite, in writing, and made known to all whose activities may be affected by the action. It is considered that organization charts of appropriate form should be employed as the most effective means to portray general relationships. However, detailed written descriptions are also required if confusion and over-lapping are to be avoided.

Decentralization is most frequently mentioned in connection with separate establishments of a multi-plant company. This is natural since geographical separation generally increases the difficulties and expenses of inter-communication of the separated elements, and hence increases the problems of management. However, it also gives rise to a confusion in terms, for many people use the term "decentralization" to refer to geographical separation. The accepted term for this latter situation is "dispersion," and apparently it is coming into more general use. It is quite possible, of course, for a company which possesses only a single plant site to have either a centralized or decentralized management; and the same is true of a multi-plant company which may have many plants widely dispersed. With the assumption that our study relates to single plant companies, dispersion does not enter the problem.

Something should be said about committees. There are numerous problems in large companies, in the solution of which formal

committees may perform useful functions. This is also true of the government field. However, in both fields, many committees do not operate effectively. In companies of the size classification we are considering there seems to be small need for formal committee organizations. A very few informal groups, such as the president and the division chiefs, or the division chiefs alone, may provide desirable coordination for some purposes. There appears to be no need for formalizing such relationships. In fact this survey indicates that only a negligible number of companies in the group classification studied have actively operating formally organized committees.

A reference list of writings which are considered as generally representative of the views expressed by respondents on matters pertinent to this section is provided in the Organization Structure part of the classified Bibliography.

In summary it may be said that the vast majority of respondents report the "line and staff" concept described above as being the most effective and the most widely used structural form. Most writers also report as general practice the use of organization charts, organization manuals, position descriptions and similar material as necessary supporting items for efficient functioning of the structural concept. It is generally indicated that the need for formal organization and the enumerated aids decreases as the number of employees and the variety of

functions decrease, and may disappear in small companies. However, the delineation as to what is "small" is far from sharp. Nevertheless, the available data are interpreted as indicative that "best practice" in the classification of enterprise that we are studying necessitates the "line and staff" structural form with the use of the cited supporting actions. The extent to which such use is appropriate will depend upon the size and nature of operations of a particular enterprise.

#### 8. Command.

Having listed "commander" as one of the essentials of administration, Fayol amplified the meaning of the term: "Commander, c'est-a-dire, faire fonctionner le personnel."<sup>77</sup>

This has been translated in a British edition as: "To command means to make the staff do their work."<sup>78</sup>

It is evident that Fayol did not intend to restrict this action to "the staff," as that term is usually employed in American industrial parlance. On the contrary, it seems clear that he meant that management responsibility for proper work performance applied to the entire

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<sup>77</sup>Henri Fayol, Administration Industrielle et Generale, (Paris: Dunod, 1941), p. 5.

<sup>78</sup>Henri Fayol, Industrial and General Administration, (Translated from the French for the International Management Institute by J. A. Combrrough). (London: Sir Isaac Pitman and Sons, Ltd., 1920), p. 9. —

personnel complement of the enterprise through successive levels of supervision. The latter significance is attached to the term in this discussion.

In essence this need is accepted by all respondents. However, in recent years the word "command" has largely fallen into disuse. A miscellany of terms or phrases are used by various authors as substitutes. In most common practice, perhaps, are "direction," "executive authority," "authority," "leadership," "control."

This trend seems to be co-incident with and a resultant of the increasing emphasis on personnel matters. This usage probably stems from an effort to mitigate an implied bluntness in the term "command." But an old adage reminds us that a fact, a truth, is a very stubborn thing. Hence, notwithstanding the various philosophies of the "human engineers" which advocate changes in terminology or procedure for the purpose of sugar coating "authority," one cannot evade the truth noted by L. Urwick: "It is impossible to conceive of the existence of organization at all unless some person or persons are in a position "to require action of others."<sup>79</sup>

Perhaps some discussion of the term "command" will clarify consideration of the function. Webster gives as the first definition

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<sup>79</sup>L. Urwick, The Elements of Administration, (New York: Harper and Brothers, 1950), p. 45.

the following:

Command, v.t. - l. to direct authoritatively; to order.<sup>80</sup>

The Oxford Dictionary states:

Command, v.t. - Order, bid; have authority, control of; be supreme; be in command; be in command of (ship, forces, etc.); . . .<sup>81</sup>

In both the military services and in American private industry the common usage is applicable: to command is to direct authoritatively. In the U. S. Military services the authority possessed by an individual member is that granted by the federal constitution and laws, the regulations of his Department, and lawful orders of his superiors. In American private corporate enterprise, the authority of an individual employee, whether president or laborer is that granted under applicable federal laws; the laws of the state in which incorporated; the laws of the states in which operations are conducted; ordinances of local government; the charter and by-laws of the company; and lawful directions of company officials pursuant to proper delegation emanating from the board of directors. In either case an unlawful "command," "directive," or purported order of any kind is void. The particular term used to

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<sup>80</sup> Webster's Collegiate Dictionary, Fifth Edition, (Springfield, Mass.: G. and C. Merriam Co., 1943).

<sup>81</sup> The Concise Oxford Dictionary, op. cit.

designate the function is immaterial provided its significance is understood by all interested persons. Regardless of the term employed, however, it must be clearly understood that the right to exercise authority pertains solely to individuals possessing lawful authority applicable to the action at issue.

A further point of considerable confusion seems to be the beliefs of some writers that the possession of authority, i. e. the right to command or direct, necessarily means the exercise of that right fully on the slightest pretext. This, of course is completely erroneous. It is a fundamental tenet of police powers, for example, that only the minimum force necessary to effect compliance with the law can be justified. The same is true for military action with respect to accomplishment of assigned wartime missions, and in its peacetime duties as well. And the same principle applies to all civil activities, including the management of all private industrial enterprises.

Another concept which seems to pervade a sizeable element of management literature relates to methods of exercising authority in industry, rather than to the need of such exercise. In this view frequent reference is made to "the bull of the woods" type of foreman. It is true that such characterization might have been reasonably accurate at one period in American history. But it would seem that contract and other rights held by American workmen for many years should be

evidence enough that such conditions are no longer extensive. Improvements in management's education in the field of industrial relations probably have likewise contributed to the correction of the former situation.

The continued existence of undesirable conditions of this type in isolated instances is not doubted. In fact direct evidence is available that such conditions do occur at all levels. However, it appears that the literature exaggerates actual conditions.

Perhaps some further comment is warranted with respect to the "unity of command" concept. If, as noted above, this principle is accepted by respondents with near unanimity, how does one explain some apparent direct contradictions by experienced industrialists and sincere students of the problem?

Before discussing practices which seem to depart from conformity with this type of thought, it may be desirable to express somewhat precisely the meaning of the phrase "unity of command." The connotation is that each individual in an "institution," an industrial enterprise being the institution of our particular interest, is subject only to the "command" or direction of an authority higher in the "chain of command." The "chain of command" is comprised of all authorities in the direct sequence from the board of directors, through intermediate levels to and including the lowest elements.

The authorities referred to here are not necessarily individuals.

In an industrial enterprise the most numerous authorities of this kind are the foremen and executives in charge of the various echelons of the organization. However, at the top of the organizational pyramid is the Board of Directors. In this case all authoritative communications requiring action by individuals or elements of the company are issued as a result of group action. Such communications may be designated as "commands," "directives," "orders," "instructions," or otherwise. Similar action may be taken by properly constituted committees with respect to matters pertaining to their responsibilities.

Some writers consider that "unity of command" limits the issuance of orders by an authority to an immediate subordinate in the chain of command. This is an incorrect concept and is unsatisfactory in practice. It is true that "good practice" in normal operations warrants close adherence to a regular channel of communication through all echelons of the chain of command. But permissible and indeed necessary variations from this procedure do occur. For example, when time is of the essence in the performance of an action by a subordinate unit, direct orders from a higher level to one far down in the chain may be necessary to avoid heavy economic loss or possible disaster.

Let us examine the problem of "command" in more detail. We may take as representative of some thought on this topic the treatise

entitled "Bottom-Up Management" by William B. Given, Jr.<sup>82</sup> Mr.

Given is a successful industrialist, presently chairman of the board of directors of the American Brake Shoe Company. His ability is unquestioned; his thoughts deserve careful consideration. And surely the title implies a complete reversal of the long accepted practice. Is it to be contended that members of the organization may issue orders or directives, but that they must be given exclusively to individuals higher in the chain of command? And what is the relationship between individuals in a given level?

A reading of the book, of course, promptly and thoroughly negates all such conjectures. In essence, the message Mr. Given's endeavors to convey is that management should use fully the personnel resources at its command. No student of management will quarrel with the idea that management should encourage individual initiative and participation in a coordinated, harmonious endeavor to achieve company objectives. Certainly a sound philosophy of management, extensive delegation of responsibility and authority, and intelligent action in human contacts are necessary. Some of these areas have been discussed in this paper previously; further treatment of personnel matters will be provided later. All such provisos are accepted as "good practice" in modern management. But let us examine Mr. Given's own definition:

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<sup>82</sup> William B. Given, Jr., Bottom-Up Management, (New York: Harper and Brothers, 1949).

Under "bottom-up" management the head of the business tries to release the thinking and encourage the initiative of all those down the line so that ideas and impetus flow from the bottom-up and the entire organization contributes in the fullest possible measure to the progress and profits of the enterprise.<sup>83</sup>

Wherein does this concept differ from "good practice," or at least from expressed ideals of efficient modern management as discussed elsewhere in this paper? At first glance it may appear that there is a difference. Note particularly: "so that ideas and impetus flow from the bottom-up." Does this mean exclusively in that one direction? Is it not desirable to have cross flows of ideas at various levels? To take such an opposing position would conflict directly with the fundamental need of coordination. Does this statement advocate that transmission of "ideas and impetus" downward be prohibited? Not at all. For on further examination it appears, that since it is desired to establish a condition in which the "entire organization contributes" to the established goal, it is unlikely that any prohibition of cross flows is intended. With respect to a down flow we may note that "the head of a business tries to release thinking and encourage the initiative of all those down the line." How better can he accomplish this need than by making suggestions to subordinates, and by encouraging all officials to do likewise? Webster says to suggest is "to cause (idea) to present itself, to call up

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<sup>83</sup>Ibid., pp. 4-5.

the idea of by mention or association.<sup>84</sup> Surely most participants in industrial management problems will agree that intelligent personal interest shown by a senior in the work of a member of his organization is helpful to the latter. It also tends to increase the morale of the group. And if, in addition, this senior can offer for consideration an idea which is at the same time relevant and valuable, the resultant inspiration will be much greater.

But Mr. Given does not think that a down flow is completely unnecessary. He notes that: "The chief executive makes clear the objectives, charts the course, and holds the organization to it. Naturally, he makes many suggestions, but he seldom gives orders."<sup>85</sup> All these, of course, represent accepted practice of modern management. And later this author adds: "There is nothing magic about modern management. It does not work automatically. Sometimes it fails, and the head of the business must give a top-down push in some situation, or in a particular area."<sup>86</sup>

Thus here we have need for impetus from above as well as for encouragement from that source.

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<sup>84</sup> Webster's Collegiate Dictionary, op. cit.

<sup>85</sup> William B. Given, Jr., Bottom-Up Management, (New York: Harper and Brothers, 1949), p. 4.

<sup>86</sup> Ibid., p. 55.

In summation it seems clear that Mr. Given, in spite of the title of his book, is in fact advocating the current widely professed management doctrine.

Another type of consideration of the "command" function is often designated as "group centered leadership." A recent treatise on this subject, generally representative of the theory, is provided by Dr. Thomas Gordon.<sup>87</sup> A brief comment may be warranted. The first problem encountered is the present complex one of semantics. A "leader" (not commander or director) is now defined as:

. . . any individual whose behavior stimulates the patterning of the behavior in some group. By emitting stimuli, he facilitates group action toward a goal or goals, whether the stimuli are verbal, written, or gestural.<sup>88</sup>

Of course, there is much in Dr. Gordon's book of importance to an industrial manager. But if one substitutes more usual management terminology for the "jargon" of the psychologist, there seems to be no matter of present significance for application to industrial management that is not presently in use. Dr. Gordon makes many references to the difference in the concepts of "group centered leadership" and

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<sup>87</sup> Thomas Gordon, Group Centered Leadership, (New York: Houghton Miflin Company, 1955).

<sup>88</sup> A. W. Gouldner, ed., Studies in Leadership, (New York: Harper and Brothers, 1950), as quoted by Thomas Gordon, Group Centered Leadership, (New York: Houghton Miflin Company, 1955), pp. 17, 18.

those of "traditional management." But reading of these statements gives the impression that his "traditional management" is comparable to the "ordinary management" of the Taylor era, certainly not that of any of the well managed enterprises of the present day. Of particular interest in our immediate study is an apparently actual, undisguised case study of the application of group-centered leadership in a plant that falls in the classification of our study. It is a metal working plant, manufacturing a machine product for consumer use, and employing about 325 men and women in the plant, office, and outside sales force.<sup>89</sup> A four year initial attempt to apply the principles of "group centered leadership" was considered a failure, but was followed by a year of excellent results, according to the report. However, the justification for such a conclusion on the basis of the data submitted, is not evident. A more important point is the long period required for corrective action in a small plant of possibly 200 operating employees. It appears that application of current accepted management doctrine in a reasonably competent manner, should have produced a satisfactory outcome in a much shorter time.

None of the literature reviewed in this survey provides any basis for modification of the long established principle of "unity of command" as a fundamental to a successful organization. In order to provide

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<sup>89</sup> Gordon, op. cit., pp. 307-353.

the reader with a more complete background for consideration of this topic than is possible from the few documents cited herein, a reference list of pertinent works is included in the classified section of the bibliography.

In the next section we will discuss coordination.

#### 9. Coordination.

Coordination, say Mooney and Bailey -- "is the orderly arrangement of group effort, to provide unity of action in the pursuit of a common purpose."<sup>90</sup> And they add: "When we call coordination the first principle, we mean that this term expresses the principles of organization in toto; nothing less."

The above language gives an excellent portrayal of the significance of coordination to organization. And if we now turn to consideration of Fayol's own words in defining the nature of this authority, we will find very close agreement with the concept expressed. Fayol wrote: "Coordonner, c'est-à-dire, relier, unir, harmoniser tous les actes et tous les efforts."<sup>91</sup> We may translate this literally as:

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<sup>90</sup>James D. Mooney and Alan C. Bailey, The Principles of Organization, (New York: Harper and Brothers, 1939), p. 5.

<sup>91</sup>Henri Fayol, Administration Industrielle et Generale, (Paris: Dunod, 1941), p. 5.

"To coordinate, that is to say, to bind, to unite, to harmonize all actions and all efforts." Surely this conveys fully the idea of the need for smooth, harmonious correlation of all endeavor toward an assigned objective.

But at this point a reader may ponder the desirability, even the advisability, of considering "coordination" as an attribute of an "organization standard." He might readily admit that the nature of the inter-relationships of individual members has an important bearing on team effectiveness; but he might aver that the mere tabulation of coordination as an essential ingredient of organization can be of no great consequence in the efficiency of operation. Such a view, within the narrow confines indicated, is, of course, correct. Simple assertion that coordination is necessary or even published authoritative directives that close coor-  
dination must be achieved, can be expected to secure only unimpressive results. A high degree of coordination cannot be attained by any simple process. Many diverse methods must be employed; detailed procedures and relationships pertaining to many of the other attributes of organiza-  
tion must be relied upon to point the way to the elements of coordination. For example, personnel must be properly trained to understand the importance of coordination; policies must incorporate and disseminate the concept; organization charts and manuals must provide some of the more direct instructions on relationships and procedures; and a control system must give assurance that prescribed policies and procedures

are being complied with.

But if it is true that a high level of coordination necessitates action in such various fields, what is to be achieved by the inclusion of "coordination" as an attribute? The requirement for this action is to make certain the recognition by top management of the extreme importance of coordination in obtaining efficient functioning. This is not a matter in which "lip service" by management to a need for coordination will adequately serve. Without a thorough understanding of the problem by top management there is small chance that thorough appropriate subordinate action will be taken. Consideration of this item as an attribute is warranted as a means of securing the recognition of top management of its fundamental importance.

Some readers might infer from the above discussion that "coordination" is an initial problem, once solved forever solved. This, of course, is not true. In addition to this basic concept, therefore, it is desirable to consider the ever present continuing character of the need, and how and when best to meet it. Mary Parker Follett recommended the following action for this purpose:

1. Coordination by direct contact of the responsible people concerned.
2. Coordination in the early stages.
3. Coordination as the reciprocal relating of all the factors in a situation.

4. Coordination as a continuing process.<sup>92</sup>

This citation is a good exposition that successful coordination is not a sporadic concern of management; it must be given attention "first, last and all the time" if high effectiveness of operation is to be attained and retained.

A British industrialist furnishes a pertinent illustration of the essential nature of coordination in a business enterprise by comparison with the problems of an orchestra and adds: "Cacophony can be kept out of business only if everyone plays his proper part in the quality, intensity and timing of his effort."<sup>93</sup>

Some further consideration of the concept of coordination may be desirable. Noting Mooney's statement, quoted above, that coordination expresses the principles of organization in toto, one might question the need for two words to cover the concept. However, both are necessary to a full appreciation of the idea. Organization structure emphasizes the idea of "division of labor," an assemblage of separate,

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<sup>92</sup> Mary Parker Follett, "Individualism in a Planned Society," in Dynamic Administration, Henry C. Metcalf and L. Urwick, eds., (New York: Harper and Brothers Company, 1940), p. 297.

<sup>93</sup> Eccles, J., "Organization and Management," Institution of Electrical Engineers, Proceedings; 98.1 pt. 1: 14-15 Ja. '51, p. 15.

distinct functions. It portrays a static situation. Organization charts are necessary, one might say indispensable, as a means of readily presenting the components of an organization and their inter-relationships. Nevertheless they somehow seem to confirm an impression of a fixed, motionless, perhaps even an inert condition. But as we have noted above organization itself must be dynamic. Coordination conveys the idea of action - not just any kind of action - but smooth, harmonious, united action of all the separate elements of the organization structure. Coordination vitalizes all the parts into action as an integrated dynamic whole; it is an indispensable element in the functioning organization.

Reviewing the matter set forth in the above discussion, and reflecting upon the significance attached, it seems impossible to conceive of an effective dynamic organization which does not possess an intimate and thorough coordination between the component parts. Of course, this does not mean that such a condition can be achieved by inserting a rectangle on the organization chart and designating it **COORDINATION**. No simple action can attain worthwhile results in this endeavor. A high degree of coordination can be reached only if the matter is given appropriate attention in proclaiming the philosophy of top management, in specifying the company objectives, in stating policies, in prescribing procedures, in arranging the organization structure and similarly as an incidental action in other related attributes.

Organization without coordination is a contradiction in terms and hence use of the two words might appear redundant. The need for the use of both terms arises from the importance of emphasizing that highly effective organization can be established only by effective coordination. It follows that coordination must be considered as a necessary attribute of sound organization.

The next item to be studied as a potential "attribute" is Control.

#### 10. Control.

The historical development of the concept of control as a means of informing administrators concerning the results of their activities has been well covered by L. Urwick.<sup>94</sup> A discussion of the change in purpose of control from that of merely accounting for past actions often long after their performance, to that of modern business as one of very lively interest and bearing to current activities is presented by many respondents. An appreciation of the nature of this change will greatly enhance one's understanding of the present importance of this function. The modern practice of control is well defined by Fayol in terse, definite language: "Contrôler c'est-à-dire veiller à ce tout

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<sup>94</sup>Lyndall Urwick, The Elements of Administration, (New York: Harper and Brothers, 1950), pp. 97-113.

se passe conformément aux règles établies et aux ordres donnés.<sup>95</sup>

A literal translation of this sentence permits little chance of misunderstanding the concept: "To control, that is to say, to see that everything that is going on conforms to established rules and given orders." While this sentence may be rephrased and reworded in more current American usage, it needs no change as a definition of the control function.

It should be noted here that "control," as used in American industrial practice to describe this function, bears no connotation of executive direction. It is a staff, not a line function. In British literature, on the contrary, it is frequently used as a synonym for "command" and "direct."<sup>96</sup> The function constitutes "follow-up" action to establish the facts of actual performance pursuant to executive directives. These results are then analyzed for comparison with predetermined standards. These analyses, prepared by the staff, may point the way to corrective executive action. Such action may take different forms, i.e. (1) improvement in performance to secure better compliance with the existing standard, or (2) adjustment of the existing standard to a more practicable one in the overall endeavor to attain the objective of the enterprise.

The characteristics of the attribute are decidedly different

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<sup>95</sup>Henri Fayol, Administration Industrielle et Générale, (Paris: Dunod, 1941), p. 5.

<sup>96</sup>Eccles, op. cit., p. 14.

those of coordination treated above. Coordination, it has been noted, is effected by incorporating appropriate provisions in many other attributes. Such provisions form integral parts of the pertinent attributes. On the other hand, the control function is operated as a separate entity, quite distinct from the operative chain of command. It is a staff function and the principal control official reports to top management, usually the president in small companies. In its field of action, it is essentially analogous to the overall inspection function with respect to the efficiency of manufacturing operations and the quality of products. It is in addition to the activities of the production and the usual administrative elements of the business. It provides a check on their operation.

The primary significance of "control" is that it enables upper levels of supervision and top management in particular to conduct its activities in accordance with the tenets of the "exception principle." This phrase, in management parlance, refers to the practice of management of confining the primary attention to those activities of the business which the control records indicate are departing from the established norms. Only cursory supervision is given to those areas in which the control records indicate agreement between results and plans. In other words, effective "control" enables top management to concentrate its consideration on the matters of greatest need.

Control must be considered as an essential attribute of efficient organization.

The survey indicates that the need for "control" as an aid to management in current operations is thoroughly appreciated by the great majority of contributors to the literature of management and organization. A selection of works considered to be representative of the contributions to this phase of the literature is given in the Control section of the classified bibliography.

In summation it may be said that the requirement for control accounts for operational purposes, distinct from but coordinated with financial and property accounting systems, is well recognized. This necessitates reporting procedures which provide all pertinent levels of supervision with prompt and accurate data on variations of performance or other important conditions from prescribed norms. A "control" system constitutes an essential attribute of an organization standard.

In the next section personnel considerations will be discussed.

#### 11. Personnel.

It is doctrine in classical economic theory that the agents of production are commonly classed as Land, Labour and Capital, and "by labour is meant the economic work of man, whether with the hand

or the head."<sup>97</sup> Since the "personnel" of our designation embraces the same agent as the "man" of the accepted theory, it might appear that the essentiality of such an attribute in industrial organization is wholly obvious. Consequently any further discussion of the matter might seem superfluous and pointless.

It is true, of course, that no industrial enterprise could exist without the essential ingredient of "man," or "personnel" if we employ current usage. But it is equally true that the success of an industrial undertaking is dependent upon the qualifications and competence of its personnel. It is the intent of this particular study to examine some of the characteristics which are essential to attainable and acceptable personnel standards.

Elton Mayo wrote: "We have too few administrators alert to the fact that it is a human social and not an economic problem which they face."<sup>98</sup> And writing many years later Walter Brett Donham states that we have learned that: "business is not applied economics."<sup>99</sup> The flood of literature in recent years relative to personnel problems in industry, undoubtedly indicates a greatly increased awareness of

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<sup>97</sup> Marshall, op. cit., p. 138.

<sup>98</sup> Elton Mayo, The Human Problems of an Industrial Civilization, (New York: The Macmillan Company, 1933), p. 188.

<sup>99</sup> Donham, op. cit., p. 13.

this problem on the part of both educators and industrialists.

The usual treatment of personnel provides for two general categories which may be considered as provision and utilization. In each case these categories are sub-divided for more detailed consideration in quite comparable ways, but usually with varied nomenclature. The more common usage will be discussed separately for a few items of major interest.

Provision, as here employed includes procurement, maintenance, and separation. In theory, provision may be accomplished by three different methods: (1) by acquisition of fully qualified individuals for particular duties from sources external to the enterprise; (2) by employment of untrained, unskilled persons, and by suitable training subsequent to employment, until a satisfactory proficiency is attained; (3) by a combination of these methods. Examples of the first type are the employment of journeymen of established trade classifications for work strictly so classified. In the second method cited, unskilled individuals may be employed for labor or routine operative positions, and trained "on the job," sometimes with a very short course of direct training. In practice, however, the third type is becoming more and more common. In this procedure, the employer is much more discriminating in acceptance for original employment than was the common practice formerly. A serious endeavor is made to record accurately both mental

and physical qualifications, and "attitudes" that may have an important bearing on the subsequent value of the applicant to the enterprise.

As one might expect, the greatest emphasis is placed by nearly all writers on "key personnel." In most cases this is interpreted as executive personnel, and in consequence great stress is placed on the development of individuals for management positions. However, this concern is not limited to this single type of qualification. An extreme shortage also exists in key technical personnel, including research scientists and many types of engineers. These conditions are evidenced particularly by widespread comment in periodical literature and the daily press. Many companies are experimenting with new type compensation plans as a means of increasing the quality of key personnel.

As a result of the shortage of qualified key personnel, top managements are taking much more direct interest in the assignments of such men to duty, and in training methods to qualify them for assignments at higher levels. While more evidence is available covering these practices in the large corporations than in the smaller ones, there is no doubt that the problem is common to all manufacturing industry.

Basic elements of personnel activities are selection and placement. However, the methods employed in the selection of individuals for employment vary greatly throughout American industry.

As one would expect, the large companies usually have much more elaborate procedures than the smaller ones. In general, however, the routines include the application, interview, references, and tests in some form. There are usually some provisions of minimum requirements, pertinent to all applicants, which are considered essential qualifications, or, on the contrary, definite bars to employment in any capacity. Such provisions may relate to physical or mental characteristics, or to "attitude." In addition, almost invariably, selection includes "job oriented" considerations; that is, the suitability of an applicant for a particular classification of work and often for a specific assignment. The effectiveness of selection for specific assignment is greatly enhanced by utilization of carefully prepared questionnaires which provide data that have been demonstrated to be essential characteristics for such assignment.

Top management must, of course, prescribe the personnel policies, and approve the "Personnel Regulations" which govern the selection and placement of all employees. It must also maintain adequate "control" of the functioning of the program, so as to be assured that the prescribed policies and procedures are being complied with, and that they are reasonably satisfactory. However, the major concern is in the area of "key personnel."

In a very literal sense key-personnel of an industrial

enterprise constitute the keystone of the organizational structure, and their withdrawal from the assembly would result in the collapse of the whole edifice. Probably a rather accurate concept of the significance of the term may be gained, if we consider "key-stone" as a metaphor for "key personnel." In common practice the term may be applied to individuals who occupy the most critical positions in the supervisory organization, or to non-supervisory employees performing duties of great significance in the functioning of the whole.

It is obvious that the size and nature of a business are determinants of the number and characteristics of persons that may be classified as key-personnel. In this study, since the enterprises considered are rather small, we will assume that key-personnel are the executives, staff, and members of first line supervision. The latter officials, as the immediate points of contact of the management team with the labor force, bear heavy responsibility for achieving a high standard of enterprise productivity.

The problems of executive and technical staff personnel in companies of the size classification we are studying, are closely related. Indeed, in most cases, the same individuals must perform duties applicable to both classifications. Therefore both will be considered together as a single pattern. The problem relative to the first line supervisor varies somewhat from this pattern, and will be given some

separate attention.

Selection of supervisors may be made either from within, or from outside of the force of employees. The first of these methods has the advantage of increasing employee morale by promotion of competent employees. It should also provide a greater assurance of satisfactory personal qualifications, since the opportunity for observation of the employees' habits has been provided.

Nevertheless, it is frequently desirable to bring in new people as a partial supply, to get the advantage of greater or more specialized technical training and broader or at least different outlooks on the firm's problems. On occasion, action of this type may include individuals with experience in competitors' plants. The injection of "new blood" is often very helpful. But even if it is company policy to fill all first line supervisory positions from the work force, it is highly important that candidates for promotion be given training in management responsibility prior to assignment to such duties.

There is widespread comprehension in management circles that training of personnel is one of the most important functions of management. In consequence, varying procedures for selection of personnel for employment or promotion in industry have been advanced by ardent advocates, with a view to minimizing the need for subsequent training. Obviously some methods of selection will be superior to others under

existing conditions of a specific situation. But even if superior selection practices are exclusively employed, further training of some sort, in varying extent, is essential after placement. Appreciation of this condition by management is inherent in the observation of an educator:

Indeed, no matter what types of personnel problems may appear to be important to management at any particular time, the one almost universally suggested method of attack on them is more and better training.<sup>100</sup>

It is obvious of course, that any method of selection for hiring involves an evaluation of prior training as a factor in assaying the competence of the applicant for the position or job vacancy being considered. Such training possessed by an applicant may be little or great, and may have been acquired in the public schools, trade schools, college, in correspondence courses, in other employment, by self-study, or otherwise. This particular discussion, however, is limited to consideration of industrial management's responsibility for training of employees in their enterprise.

The great importance of training within industry as an effective means of increasing the national product, was highlighted by the urgent need for greater production forced on the nation by the military requirements of World War II. In recognition of this situation the War Man-power Commission established a Bureau of Training, and published a

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<sup>100</sup> Dale Yoder, Personnel Management and Industrial Relations, (New York: Prentice-Hall, Inc., 1949), p. 250.

whole series of documents on the subject. It is entitled the "Training Within Industry Bulletin Series," and constitutes a valuable aid to managements in the solution of their acute problems in this field.<sup>101</sup>

For many years the American Management Association has been well aware of the importance of this matter and its publications are replete with pertinent articles, covering wide areas of interest internal to the subject. Restricting the selection to literature relating to supervisory personnel, citation of some of the titles may serve to furnish a concept as to the extent of the range involved in that area, for example:

"Training Understudies"<sup>102</sup>  
 "Training in Administration and Human Relationships"<sup>103</sup>  
 "Supervisory Development-A Case History"<sup>104</sup>  
 "Training Engineers to be Managers"<sup>105</sup>  
 "Getting Back to Fundamentals in Executive Development"<sup>106</sup>

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<sup>101</sup>Paul Pigors and Charles A. Myers, Personnel Administration, (New York: McGraw-Hill Book Company, Inc., 1947), p. 146.

<sup>102</sup>"Training Understudies," Personnel, Vol. 28, No. 5, March, 1952, p. 407.

<sup>103</sup>A. Winn, "Training in Management and Human Relations," Personnel, Vol. 30, No. 2, September, 1953, p. 139.

<sup>104</sup>Ellsworth S. Grant, "Supervisory Development - A Case History," Personnel, Vol. 30, No. 4, January, 1954, p. 314.

<sup>105</sup>James C. Stephens and Gilbert Chester Jacobus, "Training Engineers to be Managers," Personnel, Vol. 30, No. 5, March, 1954, p. 374.

<sup>106</sup>Robert K. Stolz, "Getting Back to Fundamentals in Executive Development," Personnel, Vol. 30, No. 6, May, 1954, p. 434.

Even a very casual consideration of the problem readily discloses that the types of training needs vary greatly. As the requirements of the positions demand higher skills, and greater complexity of operation is involved, the necessity for training increases greatly.

The first classification to be included herein is that relating to executive training. Recently this phase of the problem has been getting a great deal of attention in management circles, because of the complexities involved in developing highly qualified executives. Robert K. Stoltz, McKinsey and Company of New York, comments:

Most top executives today express real concern over the problem of finding men equal to management's tasks. In addition, they see clearly that the expansion of the economy, the growth of individual businesses, the increasing demands of competition, and the growing complexity of management work place an ever-greater premium on the ability to strengthen supervisory and executive forces.<sup>107</sup>

At this point, it seems necessary once again to call attention to a problem of semantics. It may be noted, that throughout our immediate discussion, the word training recurs repeatedly. However, some writers take exception to the use of the term "training" to specify the need. They assert that the term is inadequate and that the correct word to define the essential process is "development." Without regard to the tenuous nature of the play on words, the point these authors seek

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<sup>107</sup> Ibid., p. 434.

to make is sound enough. In fact it is of extreme importance. It is, that the necessary process is one of individual growth. Teaching of appropriate subjects, job experience, environment, and other circumstances may aid, retard, or inhibit this essential transformation. It cannot guarantee a desired result. It is individual response, individual development, nurtured and expedited, no doubt, by application of favorable factors, which alone determine the level of competence acquired. A measure of the level of competence acquired, of course, is a matter of extreme difficulty. It does not necessarily coincide with the amount of recognition received by an individual from a business enterprise with which he may be most directly connected; nor, for that matter, from any other "institution" with which he may be associated.

Returning to consideration of personnel development and accepting the validity of the concept of personnel development as distinguished from mere training, it becomes obvious that major attention must be given to executive levels, since greater growth is necessary there.

The many varied types of training courses, both formal and informal, conferences, technical association meetings, etc., no doubt all contribute to the training mission. However, it seems that by far the most important single program is a planned rotation of duty assignments, which complies with certain fundamental requirements. With

a view to development for high level executive position the plan should include: (1) responsible assignments as assistant chief of an important echelon of the enterprise, or chief of one at a lower level; (2) the immediate senior of the man being trained should be held responsible that important responsibilities are delegated, subject of course, to reasonable guidance; (3) that rotation be on a basis of two or three years at opportune times; (4) that fitness reports be made by the immediate senior at regular intervals of from 3 to 6 months; (5) that top management make frequent check of progress.

It is obvious that such a program is a long range plan, and hence is feasible only for a company of sufficient size, stability, and future prospects to warrant such forward looking action. But even in a small company the chief executive should endeavor to utilize the advantage of rotation in so far as practicable. Many advantages can be derived from a less formal and regularized program, if the principle is adhered to. It is, of course, a function of top management to assign executives to duties as the best interests of the company require. In doing so the long term factors must be carefully weighed with the more evident short term demands. The point to be emphasized is that actual responsibility in carrying out the company's operations contributes to development of executive ability in a way that mere instruction cannot. The endeavor to accent this advantage

no doubt warrants the stress which the recent literature places on the term "development" as contrasted with "training."

The above discussion has referred especially to the upper levels of supervision. Somewhat similar attention should be given to the intermediate levels of supervision, since they, in large measure, constitute a preliminary training ground and a source of supply of candidates for the higher positions. It is probable, however, that the rate of "turn-over" may be much higher in this group. Therefore the expense of the training features as a percentage of volume of actual work performance may be considerably lessened. Nevertheless promising candidates for promotion should be carefully observed and the job rotation feature should be used to assist in their development whenever practicable.

The next step to be considered is training the first level of supervision. It is now generally conceded in management circles that some formal, planned training course is essential to development of effectiveness in this area. An appropriate citation to illustrate the inherent problem is taken from Pigors and Myers:

The difficulty with old-fashioned training on the job was that it inevitably varied in different parts of the company, because it consisted in the casual absorption of what each supervisor's immediate superior said and did. Obviously such training could never lead to uniform practice by all first-line supervisors or enable them to feel and act like representatives of a management team lead by the chief executive. <sup>108</sup>

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<sup>108</sup> Pigors, op. cit., p. 149.

A program of foreman training poses many problems. While the duties of foremen have changed greatly with the rise of union power, many of the men have not. Aware of this, top managements are endeavoring to correct the condition by education. A frequently employed method is that of conferences of foremen and higher supervisors after usual working hours. At these conferences, the problems of industrial relations in modern industry, for example, are discussed by the industrial relations director, and on occasion by outside speakers experienced in such field. The primary endeavor, of course, is to instill in the foremen that they are a part of management. While desirable for company efficiency, such an effort cannot succeed unless the higher levels of management can clearly demonstrate their understanding of the foreman's status as an important element of management. A comment on this situation by Professor Berkowitz, of Rutgers University is appropriate on this point in describing actual conditions of a case study:

The prime difficulty was that higher echelons of management were not geared to any change in the foremen's activities. Nobody in management had taken the trouble to re-define the foremen's authority in a manner commensurate with the new responsibilities they were being urged to assume. <sup>109</sup>

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<sup>109</sup> Monroe Berkowitz, "Education of Foremen Can Be Dangerous," Personnel, Vol. 28, No. 5, March, 1952, p. 425.

The field of industrial relations is taken as an example of foreman education, because of its tremendous importance in industry at this time. However, other problems in this area are also susceptible of solution by appropriate conference techniques. An example of more general application is the case of one company reported upon by Professor Holden in which he notes three practices pertinent to this problem. These include: a customary practice of giving men promoted from the ranks a two or three week orientation course at headquarters prior to their assumption of supervisory responsibility; utilization of the personnel and industrial engineering departments as preferable initial assignments for supervisory duties; brief "post-graduate" courses at intervals of a few years for selected supervisors and staff personnel.<sup>110</sup>

The general subject of development has been selected for emphasis here as a very important facet of the "personnel" attribute. It is a matter of enterprise-wide concern. Before closing this discussion, however, it seems desirable to comment briefly on a closely related item. This is the question of "attitudes."

Proper "attitudes" are of immense importance in the effectiveness of any development program, and in the efficiency of the conduct

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<sup>110</sup>Holden, op. cit., p. 113.

of operations as well. It is a matter of great importance that top management set the example in this regard, and in addition see that all levels of supervision are held to a high standard of conduct. Adverse reactions throughout the enterprise are certain to follow poor performance by top management. This is one of the major causes of low morale. A pertinent comment made by a research team of the Yale University Institute of Human Relations confirms the point of view:

#### Attitude of Management

In our research we have been reminded again and again that "it's the people on top that make the difference." Workers, foremen, and members of higher management repeatedly emphasize the extent to which the behavior of anyone in the management hierarchy toward those below him depends on how he in turn is treated by his superiors. . . .

A policy can only succeed at any level if it is also practiced at a higher level - and this ultimately at the very top level. <sup>111</sup>

A further sampling of views of respondents which are believed to be representative of the literature is contained in the references in the Personnel section of the classified bibliography.

In summation we may recapitulate the facets of personnel considerations which constitute the major responsibility of top management in this area, as follows:

Especial importance of attention to "key personnel" as described above.

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<sup>111</sup> Arthur N. Turner, "Management and the Assembly Line," Harvard Business Review, 33:5, September-October 1955, p. 44.

Establishment of employment procedures to assure provision of a high initial competence as is feasible.

Establishment of a program for personnel utilization which gives consideration to current operations and to development for future requirements as well.

Demonstration by all management in connection with the implementation of the above actions, that management fully appreciates the human social problem which it faces.

The immense importance of the listed facets necessitate acceptance of personnel as an attribute of sound organization.

The next attribute to be considered is Materiel.

## 12. Materiel.

In the discussion above we have noted the fundamental relationship of personnel to industrial organization since it is a basic "agent of production." "Materiel" enjoys a similar relationship because it is embraced by the concept of either "Land" or "Capital" as these terms are defined in economic theory.<sup>112</sup> It is therefore

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<sup>112</sup> Marshall, op. cit., p. 138.

impossible to conceive of an industrial undertaking without materiel in some form. But the mere presence of materiel does not assure success in an industrial enterprise. Here, as with personnel, successful operation is dependent upon the competence of management in the provision of particular kinds of materiel and in its effective utilization. This discussion will cover some of the characteristics of materiel practices which are considered essential to effective organization.

Many topics are available for consideration. We might select sites, buildings, equipment or raw materiels; we might cover the functions of procurement, processing, maintenance, or sales. It appears, however, that acquisition or replacement of capital equipment provides a field which is particularly advantageous for our purpose. Major attention will therefore be given to that facet of the attribute.

As noted previously, many authors define organization as a process concerned exclusively with men. In view of this, it should occasion no surprise that the literature on organization reflects this sentiment. Nevertheless, many writers who so define the term do provide an extended presentation of the need for organizational elements concerned with materiel. The treatment frequently covers the entire materiel field, i.e. the acquisition of facilities, both buildings and equipment; their utilization, maintenance, depreciation, and

replacement procedures; and the procurement, inventory and issue procedures for raw materials and operating supplies. There appears to be universal appreciation by all respondents in this area, for the need of economical procurement, adequate maintenance, and full utilization of facilities if economical operation is to be achieved. And similar concern for inventory control and use of supplies is also generally shown. The greatest variation in practice occurs in matters of depreciation and replacement policies applied to facilities. It has been mentioned above that no enterprise can be successful unless it is a dynamic organization. An essential element in such an achievement is a dynamic equipment or re-equipment policy. Provision of such a policy, and effective compliance with it, is a major responsibility of top management. The non-uniformity in the concepts of management as to an appropriate policy, however, indicates a need for thorough study. Consequently, a somewhat detailed exposition of the problem will be provided here.

The term "facilities" is commonly used in American enterprise to include all items of "fixed capital" of an enterprise, often referred to simply as "capital goods." Fixed capital in common business parlance, comprises land, buildings, machinery, machine tools, jigs, fixtures, and equipment of all kinds required to permit manufacture. It does not include materials or supplies which enter directly into the

final product or are consumed in the manufacturing process, and which pertain to the "circulating capital" of the enterprise. In considering the whole national economy, rather than a single manufacturing enterprise, this concept must be stated broadly, for example:

Capital goods, comprising facilities for production, distribution, transportation, communication and commerce. They are used primarily for the production and exchange of the goods and services consumed by the people. Included in this class are machinery, plant, equipment, locomotives, steamships, and factory and commercial buildings.<sup>113</sup>

It is at once evident that a comprehensive discussion of the entire field would be extremely extensive and time consuming. Therefore, this brief discussion will limit the treatment to that of a single phase. The selected phase, however, is considered as the most significant element of the whole, in its contribution to the progress of American industry in the attainment of the world leadership in industrial production. It includes machine tools, and the related items of tooling, jigs, fixtures, and gauges. The extreme importance of these items is, of course, the fact that they are essential for the production of most of the machinery and other equipment, which in turn are required for the manufacture of whatever articles of final product are demanded by the national economy.

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<sup>113</sup> Machinery and Allied Products Institute, Capital Goods and the American Free Enterprise System, (Chicago; Illinois: Machinery and Allied Products Institute, 1939), p. 29.

We are all aware that our so-called free-enterprise system is subject to recurring "cyclical fluctuations." When demand for final products is great, the manufacturers of such items themselves have heavy demands for machine tools. When demand for final products decreases substantially however, the producers' demand for machine tools shrinks rapidly and in severe depressions approaches zero. With such an unstable market then it seems obvious that capital is loath to invest in machine tool production facilities, as the prospect of satisfactory return is quite problematical. Consequently, as a general rule, machine tool producers tend to provide for themselves for peace-time production, only sufficient equipment to care for current needs at a high level capacity of operation. When emergency demands for finished goods arise, the demands for machine tools promptly skyrocket, and inability to provide them at the required rate immediately becomes the "bottle-neck" of the whole production effort.

The circumstances described above constitute one of the most important problems of top management of a manufacturing enterprise. The acquisition of facilities involves a very large expenditure of funds. If the use of suitable buildings on an acceptable site can be obtained by lease, a large initial commitment for such a purpose may be avoided. As a rule, however, the acquisition of machine equipment necessitates the obligation of a substantial fraction of the company's financial

resources. These items are considered to be durable goods, and are presumed to have a long operative life. In consequence, a reasonable and regular annual return over such a period will permit recoulement of the capital expenditure and a satisfactory profit. There is, nevertheless, considerable risk involved in the assumptions that must be made.

One, of course, is a technical one that the new equipment may not perform as satisfactorily in actual factory operation, as management had anticipated from its research. Other risks, however, are much greater. One of these is that the output capacity of the equipment purchased exceeds the volume of sales. In this case no return is received on the unused equipment, but much of the overhead expenditure incident to its possession continues. And possibly, in this age of innovation, the length of life may prove to be much less than that anticipated.

Consideration of these risks naturally tends to make top management conservative. It suggests severe limitation of acquisition to a fully demonstrated or solidly assured sales volume, and utilization of the shortest possible life anticipation which is permitted by tax laws. But the other side of the picture must be considered.

If the economy of the country was that of the "stationary state" there would be no problem. For under such conditions the

"gross national product" would remain constant year after year, and there would be no change in the interrelationships of demand for the various component products. In practice, however, neither of these conditions obtains. It is a function of top management to predict changes in the level of the whole economy, and of course, the particular resultant effects with respect to its own product line. The financial success of the company will depend in large measure upon the accuracy of these predictions, and upon the effectiveness of the related preparatory and implementing actions.

One of the more important preparatory actions relates to the availability of machine equipment. An upturn in the economy necessitates increased production. If machine capacity of an enterprise is fully employed at such a point, no increase can be effected. Furthermore if the machine equipment is obsolescent, production costs will be high. Also, if the economic improvement is general, the likelihood of procurement of new equipment at that time is very small. This follows since the machinery producers will then have heavy back-logs of orders. Prices will be high and deliveries slow. The position of such an enterprise within its industry will be very adversely affected. On the other hand, if such an enterprise had undertaken a timely, realistic facilities replacement program, and had provided a reasonable reserve of equipment capacity, its business outlook

would be very different. In this latter case it would be enjoying the advantages of greater productivity associated with the more modern machinery, and its available capacity would permit immediate participation in the increased market.

While most top managements display a general appreciation of the importance of facilities management in the success of their enterprise, there is great disparity in the actual methods employed in meeting their responsibility in this regard. In particular, programs for replacement and depreciation warrant further discussion.

Why, at this point, should we discuss replacement rather than acquisition? It is perfectly obvious that one cannot effect "replacement" without first having something to replace. However, the problem of replacement involves all the problems of acquisition, if any acquisition is required, and in addition a great many more, some of which are often extremely complex. Furthermore the incidence of replacement problems is far greater than that of acquisition, since most enterprises considering equipment requirements are not starting from scratch. We will therefore discuss replacement policy at this time with only incidental reference to acquisition.

Before proceeding further, it is desired to record that "replacement" as used herein, and in usual practice, is broadly construed to mean substitution of a capital asset for some previously held asset.

It is definitely not limited to replacement in kind. Clarification on this point may be provided by review of definitions by current writers, for example, replacement is: ". . . the displacement of capital goods from their function or service."<sup>114</sup>

And the Accounting Manual of the Machinery and Allied Products Institute gives the following:

Replacement is the direct or effective substitution of a capital facility for a previously held asset sold or scrapped or down-graded. Replacement may be of a group of assets by a single similar asset, or by one or more totally different facilities.<sup>115</sup>

Considering replacement then as a functional dislodgement of an existing facility, it is apparent that this may occur without the acquisition of any new asset by the enterprise concerned. That is, the function of the displaced facility may be taken over or superseded by service of other equipment of that same enterprise. This type of replacement is called "secondary" and replacement by new acquisition is called "primary."

In other words, "secondary" replacement involves only the reassignment of existing facilities; "primary" replacement requires

<sup>114</sup> George Terborgh, Dynamic Equipment Policy, (New York: McGraw-Hill Company, Inc., 1949), p. v.

<sup>115</sup> Machinery and Allied Products Institute, MAPI Accounting Manual, (Chicago, Illinois: Machinery and Allied Products Institute, 1952), p. 306.

the commitment of new capital and the following discussion is limited to that facet of the problem, and whenever the term replacement is used it will relate exclusively to this latter type of action.

Bearing in mind the nature of replacement, the complexity of the problem in determining when and to what extent replacement action should be taken is at once apparent.

There are many different procedures utilized in the determination of appropriate action, the most frequently used being designated as the "minimum average cost" and "short pay-off." In practice the bases for application of these procedures are chosen quite arbitrarily. In consequence they can be considered little better than "rule of thumb."

An indication of the extent of such variation may be gleaned from a pertinent survey of 560 companies. The question and replies were

Questions: If you would replace existing machine tools before they are actually worn out physically, how much saving in percent of cost of new machine tools would have to be shown to induce their purchase?

Replies:

Required annual saving as percent of cost of new machines	10	15	20	25	30	50	100
Percent of replies	9	5	24	22	23	13	4 100 <sup>116</sup>

<sup>116</sup>O. L. Johnson, "Machine Tool Users Answer 18 Timely Questions," Iron Age, 11 September, 1947, p. 191.

It is evident that a much better theoretical approach to this problem is essential. Among others, the Machinery and Allied Products Institute has been well aware of the haphazard nature of the techniques employed in practice. In an endeavor to improve the condition it has sponsored the issuance of several documents covering the subject in detail. In one of these, published in 1949, the author specifies three requisites of sound replacement policy:

1. rational analytical framework for the comparison of mechanical alternatives.
2. proper organization.
3. proper attitude all along the line including the top officials or the board of directors . . . who make the final decision. <sup>117</sup>

This document seems to have been well received by industry. As yet, however, no accurate data as to its effect are available.

The related problem, a realistic depreciation policy, is likewise a matter of direct concern to top management. In this case also the methods of accounting differ greatly, but it appears that increasing attention is being given the matter in recent years. Current high levies of corporate taxes augment the problem. An understatement of depreciation will result in an apparent increase in earnings, which, on some occasions, managements might find helpful. For "long run"

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<sup>117</sup> Terborgh, op. cit., p. 232.

considerations, however, the comment of George Terborgh applies: "The cost of capital consumption cannot be exercised by disregard or reduced by understatement."<sup>118</sup> Because of the large capital investment in facilities, it is incumbent on top management to see to it that all facilities be kept fully employed, in so far as it is practicable. This applies to both buildings and equipment. Top management must be fully aware of the crushing burden of overhead that results from unused capacity. Failure to evaluate this problem correctly has frequently resulted in insolvency.

An extremely deplorable occurrence of this type and on a very large scale followed the industrial buildup of World War I. With the cessation of war time production many companies avidly seized the opportunity to buy the surplus government owned plants at "bargain" prices. In numerous instances these companies had operated the new plants, which in many cases were adjacent to their own pre-war plants. The price of a few percent of the original cost seemed like the opportunity of a lifetime, on the assumption, of course, that the potential production of such plants could be sold. However, the depression which followed in the succeeding years negated optimism of this kind. Wide-spread corporate failures followed inability to find economic use of the newly

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<sup>118</sup> George Terborgh, Realistic Depreciation Policy, (Chicago: Machinery and Allied Products Institute, 1954), p. v.

acquired facilities.

There is, of course, a similar problem, but one generally of much less magnitude, in the control of inventories of raw materials, work in process, and finished goods. Top management cannot afford to ignore this problem. However, this survey indicates a fuller appreciation of this problem than that of facilities. A reading list is provided in the Materiel section of the classified bibliography for readers who desire a broader base for consideration of this topic.

The endeavor has been made in this section to focus attention on the need for a sound equipment policy as an essential of organization. Such a policy must include long range considerations as well as attention to the more immediate problems. Extremely close attention is required by top management in this phase of activity because of the very large commitments of capital funds required. No attempt is made here to indicate a particular formula as the basis for an equipment policy. However, the literature does seem to evidence clearly that top management of an enterprise must devise an equipment policy appropriate to that undertaking, if the economic potentialities of the capital invested are to be realized. In other words, one essential facet of the materiel attribute is an effective equipment policy. The importance of this single facet amply justifies the inclusion of this attribute as a requirement for sound organization.

13. Operations.

The designation "operations" selected for this attribute may be criticized as being ambiguous. It may be contended with considerable validity that the term is used in industrial parlance with varying significance and hence its meaning is not clear. It is used here to convey the thought of overall enterprise effectiveness. Preceding attributes have covered specific parts or segments of the organizational aspects of an enterprise. In each case stress has been laid on the necessity of achieving a high quality level as the contribution of each such attribute to the effectiveness of the organization. However, even if the individual evaluations of the separate attributes are all apparently high, they fail to provide adequate assurance of the satisfactoriness of the undertaking as a whole. Specifically then, "operations" is intended to designate the need for a measure of the operational efficiency of the enterprise as an entity.

The operation of an industrial enterprise is by no means a simple, uneventful, smooth and level progression. Far from it. An industrial enterprise, in a free enterprise economy, is an intensely dynamic activity.

Marshall observes that: "A business firm grows and attains great strength, and afterwards perhaps, stagnates and decays."<sup>119</sup>

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<sup>119</sup> Marshall, op. cit., p. 323.

Industrialists generally are well aware that this observation is not a condition which occurs only in isolated cases. Boards of directors and top management in particular recognize fully the constant threat to the economic health and even life of their enterprise. They know that economic forces are powerful, multi-directional, and largely unpredictable. Changes occur rapidly. A vigorous enterprise today may be seriously ill shortly, if accurate readings of its pulse and careful examination for other symptoms are not made regularly. What is needed is knowledge of the whole in action, not merely individual information with respect to the separate parts. They must have regular, frequent, and accurate reports on the effectiveness of operations. This need may be considered as an evaluation of the efficiency of the management since it is the responsibility of management to "plan, organize, command, coordinate, and control" all activities incident to employment of the resources of the enterprise in its endeavor to achieve the objectives of the enterprise. The effectiveness of the management must be viewed against a background of results achieved, giving consideration to forces beyond anticipation or control.

In colloquial language, as noted by an industrialist, "the proof of the pudding is in the eating."<sup>120</sup> However, the evaluation of operations

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<sup>120</sup>Howard Coonley, "The Control of an Industry in the Business Cycle," in Scientific Management Since Taylor, Edward Eyre Hunt, ed., (New York: McGraw-Hill Book Company, Inc., 1924), p. 157.

as a whole, is an extraordinarily difficult task. In the preceding discussion of attributes separately, comment has been made as to methods of evaluating the individual items. Control procedures, by which accomplishments are compared with predetermined standards, are the primary means employed. In general, they are effective for this purpose. In the aggregate, of course, such measures may be utilized as an indirect method of evaluating the organizational effectiveness. A more direct and accurate method is desirable, but as yet no satisfactory means is available. One rather comprehensive effort to establish a practicable measure of the efficiency of company management has been made by the American Institute of Management.<sup>121</sup> This organization also publishes periodically, classification by name of companies possessing efficient managements as determined by its method. The appellation "scientific" however, is subject to question, as the evaluation seems to be primarily a subjective action of the appraiser. The appraisal is based upon the aggregate score assessed against several designated criteria, to each of which had been assigned an arbitrary value representing perfection. The values assigned to the different criteria vary between wide limits, but no basis for their determination is indicated. The criteria selected, or the value assigned to them, may be subject to criticism. For example,

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<sup>121</sup> Jackson Martindell, The Scientific Appraisal of Management, (New York: Harper and Brothers, 1950).

one relates to an evaluation of the social and economic utility of the undertaking. Certain industries, considered undesirable in this regard, are excluded completely from consideration. It would seem that the determination as to whether an enterprise is or is not a benefit to a society is a matter for exclusive decision by the society. This decision is customarily effected by law. Assuming legal operation, it would seem that professional management is entitled to an evaluation based on performance, regardless of whether the enterprise pertains to the steel or tobacco industry. Discrimination against a management, or its exclusion from consideration, on such a basis appears to be indefensible. It would seem to be comparable to disparagement or disbarment of an attorney acting as counsel for a defendant alleged to be of unsavory character.

With regard to assigned value, it may be noted that an extremely high value is placed on the quality of executive personnel. Of particular value in this item apparently, is the length of service of the executives with the concern being evaluated. Such a consideration is open to very serious question. In some very large corporations, with nation-wide interests and diversified products, no doubt job rotation within the organization might be fully effective in developing executive talent. In the great majority of companies, however, this would not be the case. Emphasis on service with "the company" in such cases

would be a species of in-breeding which unquestionably would reduce the overall company potential "in the long run."

On the other hand, it is fully realized that simple financial measurements, although frequently applied, are no real measure of management efficiency. Earnings, for example, in a given year may be substantially above the previous year. Yet they may have resulted from an increasing trend of raw materiel prices in such substantial amounts as to outweigh actual losses in manufacture. The more "round-about" the manufacturing process the greater the effect of a given trend of this kind.

A noted educator and industrialist provides some comment on the topic under study:

Today the wide variance of conditions between establishments within any given industry enables the general commentator to prove anything. For example, with ball pointed pens selling for from fifty cents to twenty-five dollars, it is a little difficult to judge the state of the art. Today profits are practically meaningless as a gauge of good management.<sup>122</sup>

Representative comments on this topic may be noted in the works listed in the applicable section of the classified bibliography.

It appears that, at the present time, for evaluation of overall operation, reliance must be placed on a integrated result obtained from

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<sup>122</sup>Erwin Haskell Schell, "Current Changes in Management Operating Policy," Guides to Management Operating Policy, Production Series No. 171, (New York: American Management Association, 1947), p. 4.

consideration of budgetary, financial, and operating controls, all of which should be under regular review. An "attribute" formulated by the integration of components of this nature would constitute a gauge for evaluation of the overall effectiveness of the enterprises in the classification for which it is designed. A tool of this kind would be of incalculable value to management. Hence this item must be considered as an attribute of an "organization standard."

## CHAPTER V

### SUMMARY AND CONCLUSIONS

#### Summary:

The purpose of this inquiry was concisely expressed in Chapter I by two queries, as follows:

Query a. Is it desirable and feasible to establish "Organization Standards" for industrial enterprises, utilization of which may be expected to increase operational efficiency and productivity?

Query b. What are some of the criteria for an "Organizational Standard" in a particular classification of enterprises, the utilization of which may be expected to increase the effectiveness of management?

The data required to enable resolution of the questions posed by these hypotheses were stated in Chapter III as follows:

a. Data adequate to warrant determination of the importance of the organization of industrial

enterprises with respect to its bearing on the effectiveness of enterprise management and, in consequence, on the level of the national economy.

b. Data adequate to warrant determination of the present level of management effectiveness as compared with goals considered attainable.

c. Data adequate to warrant determination of whether or not sufficient intra-classification homogeneity is shown for the attributes selected for study, to indicate the feasibility of the utilization of "organization standards" as a means of improving organization. This same data, if adequate, will warrant designation of particular attributes.

And it was there noted that for the purpose of determining feasibility, identical characteristics are neither to be anticipated nor are they necessary. Substantial agreement will serve the need. It was also pointed out that the determination of "sufficient" and "substantial" in each case are necessarily subjective decisions, and that such procedure is the customary practice in the establishment of standards.

In Chapter IV, initially, the great importance of sound industrial organization in setting the level of the national economy, and the current relative ineffectiveness of industrial management as compared

with a goal believed to be attainable were clearly demonstrated. Since the latter condition still obtains in spite of the efforts of Taylor and his disciples for half a century in advocating the application of "principles," the need for an improved method is indicated.

In the same Chapter thirteen potential attributes of an "organization standard" were then discussed in turn. In accordance with the limitations of the research, the coverage was primarily related to consideration of single plant manufacturing enterprises with 100-999 employees. In many cases the examination was limited to a single facet of the attribute being considered. However, in all cases the chosen facets were evaluated as highly important to effective organization, and hence adequate to warrant a determination of the essentiality of the related attribute to a sound organization.

While the separate analysis of selected attributes is believed to provide the best method of approach to a solution of our problem, it involves one serious disadvantage. It seems to imply a disassociation of the individual items. However, in fact, the enumerated attributes are not independent variables. A change in one causes changes in many others. In an effort to indicate the effects of the more important interrelationships, comments with respect thereto have been made in the separate treatments.

Some criticism may be made of this procedure on the grounds

that it interrupts the continuity of discussion of the particular attribute under consideration. There is indeed justification for such comment. However, the objections to this action are deemed to be outweighed by the need for the exposition of pertinent interrelationships. But this procedure alone falls far short of conveying an adequate indication of the necessity for thorough integration of all activities pertinent to the selected attributes, if an effective whole organization is to be achieved. With a view to assuring attention to this need, the last listed item, "operations," has been provided. It has been designed as a measure of overall accomplishment and is intended to emphasize the importance of ensemble action.

In the case of each attribute the weight of the evidence and the logic of the argument predominantly favor the inclusion of the procedure or function discussed as an element of enterprise organization. To be sure, the degree of the favorable predominance for the different attributes is variable, and in no case can unanimity be claimed in support of a favorable decision. Nevertheless, relying upon the "consensus" principle typical of standardization procedures, it seems clear that a favorable decision is warranted of the coverage of the selected attributes, their integration to compose an "organization standard" appears to hold considerable promise as a means of improving organization.

**Conclusion s:**

**It is concluded:**

**1. Reference Query a:**

That with respect to some attributes of organization, and within the classification of enterprise studied, it is desirable and feasible to establish an "organization standard," utilization of which may be expected to increase the productivity and efficiency of operation.

**2. Reference Query b:**

That criteria for an "organization standard" for a single plant manufacturing enterprise employing 100-999 employees should include:

1. Legal form - The Corporation.
2. Philosophy of top management - Written and published statement expressing the determination of management to assure equitable treatment of employees, customers, stockholders, and the public.
3. Company objectives - Specific and readily understandable objectives in writing and published by adequate means to reach all employees.
4. Resources available, men, money and materiel - Essential data provided to top management and top planning elements promptly and accurately.

5. General policies of top management - Written policies and procedures preferably in manual form.
6. Planning. - Total company planning, both short range and long range, based upon research and including preparation for action.
7. Organization structure - "Line and Staff" - Subdivisions of groups of related activities with direct line of authority from chief executive officer downward through entire organization. Necessary staff and service elements at appropriate levels. Organization charts, manuals, and job descriptions in sufficient detail to indicate clearly the authority and responsibility assigned to elements and individuals.
8. Command - "Unity of Command" is an absolute essential to high standards of performance. Each individual must know without question to whom he "reports," and who "report" to him.
9. Coordination - Rapid and accurate communication of instructions, and information vertically and horizontally throughout the organization.
10. Controls - Reporting procedures which provide all pertinent levels of supervision with prompt and accurate data on variations of performance from the prescribed standards.
11. Personnel - Effective program for selection, placement, training, transfer, promotion, separation, and retirement of personnel, together with satisfactory salary and wage program with adequate provisions for adjustments, and realistic labor relations.
12. Materiel - Provision for acquisition, accountability, storage, maintenance, repairs, and disposition of all materiel. Planned programs for depreciation and replacement of facilities are essential.

13. Operations - In a single plant manufacturing enterprise, "division of labor" is normally accomplished by segregation into groups of related activities on a functional basis. In the exceptional case, where manufacturing processes for items in the product line differ radically, further segregation on a product basis may also be desirable.

3. That much more extensive research, including detailed field surveys will be required to provide appropriate tenets of working forms of organization standards. The initial step should consider establishment of "enterprise classifications" to secure considerable homogeneity of enterprise characteristics; this should be followed by study of a greatly expanded number of attributes and facets of potential value for the purpose.

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This dissertation was prepared under the direction of the chairman of the candidate's supervisory committee and has been approved by all members of that committee. It was submitted to the Dean of the College of Business Administration and to the Graduate Council, and was approved as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

June 3, 1957



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